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Veröffentlichungsversion / Published Version
Arbeitspapier / working paper

RECOUP
RESEARCH CONSORTIUM ON
EDUCATIONAL OUTCOMES & POVERTY

RECOUP Working Paper 16

The Financing and Outcomes of Education in Ghana

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March 2008

DFID Department for International Development

UNIVERSITY OF CAMBRIDGE

RECOUP Working Paper No. 16

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Associates for Change[1], Ghana

Abstract

In 1987, the Government of Ghana embarked on a set of educational reforms which culminated in the reduction of pre-tertiary education from 17 to 12 years and the introduction of measures to improve access, equity and quality at all levels of the educational system. The reforms focused primarily on basic education, which had undergone a decade of decline in quality, but higher levels of education were also given some attention. The reforms were launched at a time of a severe economic downturn – the economy had posted three successive years of negative growth – and a diminished capacity of government to finance development. In response, donors became increasingly involved in the provision of finance and technical assistance. As new modalities of aid began to be established, technical and financial assistance was provided to the government for both the preparation and implementation of the reforms. Over the course of the reforms, total donor assistance is estimated at between US$1.5 billion and US$2.0 billion. As the economy began to recover substantially from its malaise of the 1980s, the government's education-sector expenditure, as a share of GDP, increased from 1.4per cent in 1987 to 5.7 per cent in 2006, albeit remaining lower than the 6.4 per cent recorded in 1976.

This study documents a mixed record of implementation and outcomes of the reforms, with some indicators showing highly uneven improvements over two decades. As regards primary enrolments, for example, the Gross Enrolment Ratio (GER) increased from 76 in 1987 to 79 in 1991, but fell back again to 73 by 1997. By 2001, the ratio had recovered to 80 but then slid to 78 by the 2003/2004 academic year. Participation in basic education, which comprises both primary and junior secondary schooling, remained "free and compulsory" over the period.

The introduction of capitation grants for schools in September 2005 reduced direct costs to households by replacing the various levies that schools imposed on parents for extra-curricular activities. This led to a 17 per cent increase in primary enrolments nationwide (with GER rising to 86) in 2005/6. This increase in school enrolments, while desirable in terms of moving the country towards meeting its objective of providing universal basic education for all Ghanaian children of school-going age, was followed, predictably, by a decline in education quality as the provision of additional teachers, facilities, and logistics lagged behind the capitation grant.

A fresh set of educational reforms, scheduled to commence in September 2007, is intended to address these problems. Issues of funding adequacy, coordination and sustainability of donor financing for these reforms, however, remain largely unresolved – especially as donor disbursements in recent years have fallen short of commitments.

[1] Associates for Change (AfC) is a research and consulting firm based in Ghana. AfC is the lead research organisation in Ghana working with the Research Consortium on Educational Outcomes and Poverty (RECOUP), a DFID supported research project.

JEL Classification Numbers:

Keywords: education, financing education, Ghana, education outcomes, Millennium Development Goals

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Acknowledgements: Roland Akabzaa of AfC provided research assistance. The paper was also reviewed by current and former officials of the Ministry of Education, Science and Sports (MOESS). The authors would also like to thank Professor Chris Colclough for his comments on draft versions of the paper. An earlier version of this paper was presented at the UKFIET conference 'Going for Growth? School, Community, Economy, Nation', 11 – 13 September 2007, Oxford. This paper forms part of the Research Consortium on Educational Outcomes and Poverty (RECOUP). Neither DFID nor any of the partner institutions are responsible for any of the views expressed here.

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Chapter 1: Introduction

Ghana is one of the highest recipients of education aid in sub Saharan Africa (World Bank 2004), and over the past two decades this aid has played a significant role in the implementation of the educational reforms that were launched in 1987. Donors' involvement in the reforms coincided with the launching of the country's Economic Reform Programme (ERP) in the mid-1980s, when the economy was on the brink of collapse and the government lacked the financial base to support the education sector.

With the turn around in the economy since 1984, however, and a corresponding increase in revenue, government's expenditure on Ghana's education sector has steadily risen. Between 2000 and 2005, education's share of total discretionary expenditures, already the largest of any sector, increased from 19.4 per cent to about 27.5 per cent 2006.[2] By contrast, the share of health, the second largest sector, rose from 6.4 per cent to 13.4 per cent over the same period. Despite changes in the resource envelope, the main priority of the Government since 1987 has been to finance basic education.

Study objectives and methodology

As Ghana embarks on a new round of reforms (scheduled to commence in September 2007) and donors intensify efforts to help developing countries like Ghana meet the Millennium Development Goals (including universal primary education), it is useful to review the implementation of the reforms and draw upon the lessons learned to inform the further development and management of the education sector. This study therefore reviewed trends and patterns in education financing and its associated outcomes over the past two decades. Specifically, this study, the first phase of a larger enquiry into the reforms, sought to do the following:

- Build up a statistical summary of the most important expenditure trends and educational outcomes since the reforms
- Provide a descriptive and analytic account of the major trends and characteristics, which emerge from the statistical summary
- Compare trends in financial inputs by the Government of Ghana, international agencies, and households with trends in educational outcomes

The paper draws upon data from organisational sources such as the Ministry of Education, the Ministry of Finance, donor agencies, as well as relevant policy documents from elsewhere. Among the data sources used were the Fourth Ghana Living Standards Survey (GLSS4), the Education Management Information System (EMIS) of the Ghana Education Service (GES), and the Core Welfare Indicators Questionnaire (CWIQ) survey. The analysis comprised an examination of trends and patterns in education spending and "outcomes" and the plausible factors affecting them.

The word "outcomes," as used in this report, refers largely to associated results from identified inputs, such as financial inflows to the education sector, but does not seek to establish a causal relationship between those inputs and their consequences, intended or otherwise. In the evaluation literature, outcomes (sometimes also referred to as "impact") are the *ultimate* effects of policy initiatives, such as educational reforms. The *immediate* effects are the "outputs" (such as school buildings) which emanate from "inputs" like financial and other expenditures. These definitions or classifications may differ, depending upon the policy question of interest. To establish a causal relationship between inputs and impact would therefore require a more elaborate "evaluative study" that, among other things, controls for factors other than the

[2] The government's budget is made up of "statutory expenditures," such as debt services and payments into the Road Fund and the Ghana Education Trust Fund, all of which are required by law, and "discretionary expenditures", which are not required by laws and can thus be reduced or increased, according to the government's development priorities and financing capacities.

known inputs. This, however, is beyond the scope of this report, which is largely descriptive and hence exploratory in nature, a prelude to a structured evaluative study.

It must also be noted that despite the restricted scope of the study, data limitations posed a major challenge for the authors. Most of the available data on the education sector are fragmentary and scattered across government and donor agencies, and when they are available they are either contradictory or simply inadequate. The 1995 data on teachers' salaries, for example, were missing, according to the Ghana Education Service. As a result, the Service simply repeats 1994 data for 1995. In other situations, data from the Education Management Information System (EMIS) differed from data in the government's annual reports on the education sector, which are typically designated as "preliminary" and tend to remain so indefinitely. All this suggests a weak data-collection and maintenance culture that will have to be addressed if the current and subsequent reforms in the education sector are to benefit from reliable and timely feedback from researchers.

Structure of the paper

The paper is divided into six sections. The first section reviews Ghana's record of educational reforms dating back to the pre-independence era and concludes with a discussion of the origins and evolution of the 1987 reforms. The second section reviews the economic environment since the reforms were launched, including factors which facilitated or impeded the smooth implementation of the reforms. The third section reviews trends in both donors and GoG financing during the reforms, with a focus on intra and inter-sectoral resource flows. The fourth section assesses various outcomes indicators on such areas as access, quality, and management and supervision. The fifth section looks beyond basic education and reviews developments in post-basic education, comprising secondary school and beyond. The final section summarises the main findings of the study, lessons learned, and suggests areas for future research.

Chapter 2: Overview of educational reforms in Ghana

Pre-1987 Reforms

Ghana's record of educational reforms has been erratic and dates back several decades, to the period before the attainment of full political independence in 1957. In 1952, under the "limited self-rule" granted by the British colonialists to the government of the Convention People's Party the Accelerated Development Plan for Education introduced fee-free primary education in the country, leading to a substantial increase in enrolments in the 1950s (see Table 1).[3] Educational facilities were expanded nation-wide to accommodate the increase in enrolment, while the government increased the intake for teacher training colleges by 1,000 between 1951 and 1953. By the end of 1953, the annual output of teachers had risen from 420 to 1,108. These achievements were followed in 1960 by the recommendations of the Botsio Commission on Education, which led to the introduction of the 1961 Education Act that made primary school and middle schools both fee-free and compulsory (World Bank, 2004; Republic of Ghana, 1999.)

Table 1: School enrolment levels (1951-1961)

	1951	1961	% change
Primary schools	154,360	481,500	211.9
Middle schools	66,175	160,000	141.8
Secondary and technical schools	3,559	19,143	437.9
Teacher training colleges	1,916	4,552	137.6
University students	208	1,204	478.8

Source: Nkrumah (1967)

Under the government's Seven-Year Development Plan (1963/64-1970), further educational reforms were proposed with the objective, among other things, of making secondary schooling, too, free to all Ghanaians.[4] Broadly, the Plan proposed changes that were to feature, in various forms, in subsequent educational reforms by successive governments. For example, the Plan proposed that "educational policy must [now] concern itself with…the teaching of skills and other attainments that are needed for the running of a modern economy."[5] In this regard, the "pattern of education" was also to be altered substantially to adequately meet the demands of a modernising economy. The duration of elementary school, which had been introduced in the 1952 reform to replace "upper primary school", for example, was to be reduced from ten to eight years. Other areas receiving attention under the plan were: Continuing education; secondary and secondary technical schools; teacher training; technical education; clerical and commercial education; university education; adult education; and education research.

In the "financing" component of the Plan, the government placed emphasis on "maximum contributions by local communities towards the development of elementary education while the central government concentrates its efforts on the development of the other elements in the education programme."[6] Passing mention was made of "international assistance by way of the provision of teachers and books and, to a lesser degree, equipment." Against this background, the authors of the Plan "hoped"

[3] The word "accelerated" implies the existences of a previous plan, the *10-Year Plan for Educational Development,* drawn up by the colonialists in 1946 and inherited by the Nkrumah government in 1951. The earliest recorded effort at educational reforms in Ghana (then Gold Coast) was in 1908, followed by the Guggisburg *Ten-Year Development Plan* of 1920, which produced Prince of Wales College (now Achimota College) in 1925**,** among other lesser known schools.

[4] The educational reforms in the plan were largely informed by the recommendations of the 1961 *Addis Ababa Summit on Education in Africa.*

[5] Government of Ghana, *Seven-year Development Plan,* Office of the Planning Commission, 1964, Accra, p.142.

[6] *Ibid,* p. 164.

that implementation of the proposed educational reforms would be "widely disseminated" enough to "attract external assistance on a generous scale."[7] With the overthrow of the Nkrumah government in February 1966, however, the Seven-Year Development Plan, along with the educational reforms, was aborted.

Later in 1966, the National Liberation Council, which had overthrown the CPP government, set up the Kwarpong Committee to review the entire educational system and recommend ways to address what were perceived to be "fallen educational standards." Among the 285 recommendations of the Committee was that "elementary education should have a duration of ten years as at present," contradicting the proposal of the Seven-Year Development Plan. Other recommendations of the Kwarpong Committee would not only define the structures of education in Ghana for many years to come but also had a significant impact on subsequent educational reforms, particularly the 1987 reforms. They included the following:

- Five years of secondary school education, followed by a "school certificate examination or its equivalent" that would allow qualified students to pursue an additional two years of sixth form for an advanced level general certificate.
- A three-year first degree course at the university (or four or more years for specialised courses).
- Two-year continuation classes patterned on the farming and industrial needs of the country to be established in two middle schools of each region to serve as a pilot scheme. The course content of these schools was to be "pre-vocational."[8]

As a "long-term objective", the committee proposed a "six-year primary school course, followed by four years of secondary school education with two years of sixth form work leading to a three-year university degree course.…"[9]

As with their predecessors, the reforms proposed by the Kwarpong Committee were abruptly terminated following yet another military coup – in 1972. But even before the coup, there were signs of "slippages" in implementation, as the number of students continued to outstrip available classroom space. In September 1969, the *Daily Graphic* newspaper reported, for example, that "only 10,000 out of 50,000 who passed this year's common entrance examination…will be admitted to various secondary schools this academic year."[10] Predictably, the new rulers appointed another committee in 1973, headed by the Dean of the Faculty of Education, University of Cape Coast, N.K. Dzobo, to review the educational system and offer a fresh set of recommendations for improving it. The thrust of the ensuing report of the Dzobo Committee was that the existing system, especially the preparatory schools and experimental schools, was not adequately addressing the manpower needs of the economy but was instead serving as the "training grounds of the elite and ruling class."

Among other things, the Dzobo committee made the following observations, which would influence subsequent reforms over a decade later:

- The common entrance as a selection mechanism for secondary school, taken at an early age, discriminated against the many pupils who needed more time to find their levels in life.
- The many pupils who fail to enter secondary schools did not have the opportunity to develop their minds and were therefore disadvantaged in life.
- Undue emphasis on mental work inadvertently fostered the development of unhealthy attitudes towards manual work and occupations of non-academic kind.
- Under the existing system, it took 15-17 years to complete pre-university education, whereas in industrialised countries, such as the USA, it occupied 12-13 years.

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[7] *Ibid*, p.165.
[8] Government of Ghana, *National Education Forum – A Decade of Educational Reforms: Preparation for the Challenges of a New Millennium*, Accra, Ghana, 1999, p. 6.
[9] *Ibid*.
[10] Daily Graphic, 19 September, 1969

On the basis of the Committee's report, the government in 1974 issued a white paper, *New Structure and Content of Education for Ghana*, which fixed pre-university education at 13 years, down from 17, by eliminating middle schools and introducing the junior and senior secondary school system as follows:[11] .

- 6 years primary school
- 3 years junior secondary school
- 2 years senior secondary school - lower, and
- 2 years senior secondary school – upper.

In terms of content, the white paper endorsed the recommendation for the inclusion of pre-vocational and pre-technical subjects in both primary and junior secondary school curricula. The Ghana Education Service was established under the Ministry of Education to supervise the implementation of the recommended reforms.

The 1987 Reforms

Besides the disruptions of military coups, a number of factors also prevented the full implementation of the various reforms, notably the virtual disintegration of the Ghanaian economy from the mid-1970s to the early 1980s, and the consequent decline in government's ability to finance the education sector. Indeed, between 1976 and 1983, government's education-sector budget, as a share of GDP, declined from 6.4 per cent to 1.4 per cent. (World Bank, 2004:7).

As government funding plummeted, the sector was also weakened by the brain-drain that had hit the rest of the economy as a result of the deteriorating social and economic conditions in the country. By 1983, approximately 50 per cent of trained primary school teachers had left the country (Ahadzie, 2000: 20). School facilities and logistics were also adversely affected by the lack of funding, leading to a shortage of books and other teaching materials, including pencils and chalk. Inadequate space at all levels of education and the generally poor education management and administration further compounded the problems of the sector. In the event, the drop-out rate increased and enrolment rate declined substantially at all levels. The situation was aggravated further by a rise of teacher and student (mostly university) strikes, calling for improved conditions of service and better academic facilities. To prevent the system from complete collapse, the government employed untrained teachers to replace the trained ones who had deserted the system. (Ayamdoo *et al*, 2006). But this seemingly desperate measure spun its own problem of lowered educational standards, as the quality of teaching by the "pupil" teachers fell far below that of the trained teachers. By 1983, the situation was so dire that 'it became necessary for a serious attempt to be made to salvage it.'[12]

The decision by government to initiate new educational reforms coincided with the government's broader Economic Reform Program (ERP), which was launched in 1983, with substantial financial and technical support from donors, notably the World Bank and the International Monetary Fund (IMF). While the Fund focused on the balance of payments problems of the country, such as the over-valuation of the cedi and the consequent decline in export earnings, the Bank concentrated more on sectoral reforms, paving the way eventually for other donors to provide additional support in subsequent years.

Within the context of the ERP, the Bank in 1984 undertook initial diagnostics of the education sector, followed in 1985 by the work of a Bank preparation mission, which proposed a "sector approach" to dealing with the country's educational crisis. (World Bank, 2004: 20). It is this proposal that eventually formed the basis of the educational reforms which were adopted in 1986 and commenced in 1987, with emphasis on basic education. A subsequent report by the Education Commission in 1988 on the state of secondary schools in the country extended the scope of the reforms to cover those schools.

[11] The senior secondary school component would later be reduced from 4 to 3 years under the 1987 reforms.
[12] http://www.ghana.edu.gh/past/postIndependence.html accessed on 12.05.04.

At the basic school level, the reports adopted almost all the major recommendations of the Dzobo report, which had only partially been implemented on a pilot basis around the country. (By 1987, for example, 118 middle schools had been converted into junior secondary schools in line with the recommendations of the Dzrobo committee's report).[13] The reforms initially focused on replenishing the depleted resources of primary schools, such as books, chalk, and pencils; rehabilitating dilapidated structures; and building new ones, where necessary. The transition from primary school to JSS also became automatic, thus removing the need for the Common Entrance Examination, which was deemed to unfairly favour children from well-to-do homes. These children often attended private schools, which were better endowed, and thus were more likely to skip the four-year middle school and go directly to secondary school. In 1985, for example, 30 percent of secondary school entrants were said to have come from private primary schools, with a significant portion of the remainder coming from the fourth year of middle school. The majority of students thus went through the 6:4:7 system for a total of 17 years of pre-university education (World Bank, 2004).

The initial absence of the recommended senior secondary schools, and the continued existence of the old secondary school system of O' and A' Levels, also created problems of transition for those completing junior secondary schools. To address these problems, the reports recommended that instead of four years, senior secondary school should be three years. The O'Level (5-year secondary school) and A'Level (2-year post-secondary-pre-tertiary school) were to be phased out in favour of a four-year tertiary education following the three-year senior secondary school.

Overall, the reforms aimed to reduce the duration of pre-tertiary education from 17 years to 12 years: 6 years of primary; 3 years of JSS, and another 3 years of SSS. Pre-school education (kindergarten) remained optional, but basic education was redefined to comprise both primary and JSS ("free and compulsory"), while the concept of "tertiary education" was introduced to embrace not only universities, as was previously the case, but polytechnics, teacher training colleges, as well as other post-secondary institutions of learning.

Beyond structural re-alignments, the content of the educational system was also subjected to extensive changes. In addition to the standard grammar-school education, pre-technical and pre-vocational skills were introduced at the JSS level, ostensibly to make the educational system less elitist (Donge, 2002: 15). Structural and content reforms, along with increased funding from both the government of Ghana and donors, were supposed to lead to particular objectives: More educational facilities, increased enrolment, and improved learning outcomes.

In summary, the 1987 reforms sought to achieve the following broad objectives:

1. Reduce the number of years in pre-tertiary education from 17 to 12 years by turning the 4-year middle into a 3-year junior secondary school and collapsing the 7-year Ordinary and Advanced level secondary school into 3-year senior secondary schools, all in addition to the 6 years of primary schools.
2. Increase access and thus enrolment.
3. Improve teaching and learning by increasing school hours – as well as the school term - and replacing untrained (or "pupil" teachers) with trained ones over time.
4. Increase "cost recovery" at the secondary and tertiary levels by, among other things, abolishing food subsidies at boarding schools and charging tertiary students a part of the cost of their education, including accommodation expenses.
5. Make education planning and management more effective.

Table 2 summarises the implementation of the reforms over their first decade.

[13] The middle schools, made up of four years, gave students the opportunity to enter secondary schools through the Common Entrance Examination over those four years. Hence, who passed at the first try tended to enter secondary schools are a younger age than those who passed later or completed middle school.

Table 2: Evolution of the 1987 Educational Reforms

	86-87	87-88	88/89	89/90	90/91	91/92	92/93	93/94	94/95
Middle school	Last cohort admitted			Last cohort graduate.	Middle schools closed				
JSS	JSS not yet begun	First cohort admitted		First cohort takes BECE exam (end of year).					
SSS (old system)				Last Form 1 cohort admitted.				Last cohort complete Form 5	Old system finished
SSS new system	New SSS system not yet begun				First cohort admitted (Jan 1991)		First cohort completed (Dec 1993)		

Source: World Bank (2004)

Donor financing of the reforms

A World Bank preparation mission in 1984 resulted in the provision of a "project preparation facility" to sponsor "some planning activities, such as a school mapping exercise as well as purchase of essential school materials such as pens and pencils." (World Bank, 2004: 17). On the basis of the mission's recommendations the Bank adopted a sector-wide, as opposed to a project-based approach and with the limited involvement of some bilateral donors provided additional financing under the Education Sector Adjustment Credit (EdSAC-I, 1986-1991). Additional funding came under the Health and Education Rehabilitation Project (HERP, 1986-1991), followed by EdSAC-II (1990-1994) at the end of the 1980s. Further support for basic education was later given by the Bank and other donors for Primary School Development (PSD, 1993-98) and the Basic Education Sector Improvement Credit (BESIP, 1996-2002).

In anticipation of an increase in demand for secondary and post-secondary education as a result of the reforms in basic education, the Bank also financed two projects, namely: (1) Community Secondary School Construction (CSSC, 1991-1998), and (2) Tertiary Education Sector (1992-1998), that latter of which "was left out of EdSAC II because of political sensitivity." (World Bank, 2004: 20). Overall, the Bank disbursed US$271 million, while other donors gave US$317.3 million, between 1987 and 2002 in support of the country's educational reforms (see Annex 2). Tables 3 and 4 show how funds from donors, led by the Bank, were used under the various financing arrangements in support of the reforms.

Table 3: Allocation of resources under EdSAC-I and EdSAC-II

	EdSAC-I (1986-91)				EdSAC-II (1990-94)	
	US$ milions		Percent		US$ millions	
	IDA	Total	IDA	Total	IDA	Percent
School building and rehabilitation	11.3	17.5	29.4	38.4	15.2	28.5
Teacher training	3.4	3.4	8.8	7.5	1.1	2.1
Teaching materials	8.1	8.1	21.0	17.8	12	22.5
School furniture & equipment	9.4	10.3	24.4	22.6	18.2	34.1
Other expenses	6.3	6.3	16.4	13.8	6.8	12.8
Total	38.5	45.6	100.0	100.0	53.3	100.0

Source: World Bank (2004)

Table 4: Allocation of resources under PSD and BESIP

	PSD (1993-98)		**BESIP (1996-2002)**	
	US$ Mil.	**Percent**	**US$ Mil.**	**Percent**
School building and rehabilitation	38.0	67.1	16.3	34.2
Head Teachers' Housing	10.5	18.6	0.0	0.0
Training materials	2.1	3.7	1.3	2.7
Training		0.0	1.3	2.7
Teaching materials	0.0	0.0	2.0	4.2
School furniture	0.0	0.0	4.2	8.8
Textbook supply	0.0	0.0	16.4	34.4
Other expenses	6.0	10.6	6.2	13.0
Total	56.6	100.0	47.7	100.0

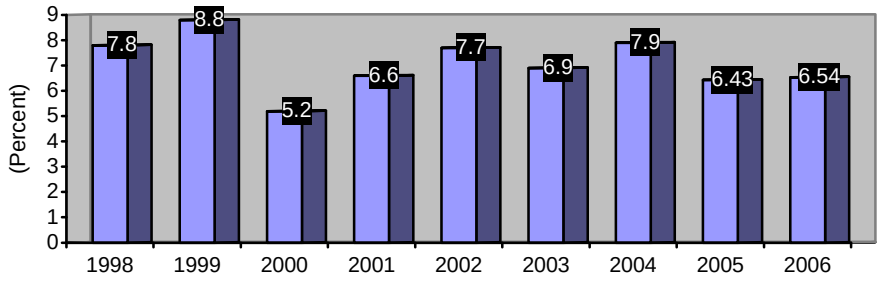
Source: *World Bank, 2004*

The contribution of other donors, particularly bilaterals, to the reforms were initially minimal, accounting for only 11.3 per cent of the total of US$10.6 million disbursed for the education sector in 1987. By 1989, however, this had risen to about 60.0 per cent, only to taper off to 21.0 per cent in 1994 and then rise again to 90.5 per cent at the close of the century (see Annex 3)

Figure 1 illustrates recent trends in overall donor shares in GoG discretionary expenditures in the education sector. The steep fall from 8.8 per cent in 1999 to 5.2 per cent in 2000 was largely due to a suspension of aid in 2000 by major donors, including the country's largest external contributor to education financing, the World Bank. This was due to the government's inability to meet certain policy conditions that year.

Notable among these donors, in terms of the scale of their financing, were the United States, the United Kingdom, and the European Union, which constructed basic schools in various districts under its micro-projects programme. Between 1988 and 2005, the UK's Department for International Development (DfID), for example, financed the UK£50 million Whole School Development (WSD) programme, which supported the construction of two pilot schools in each district for a total of 125 classroom blocks. In 1990, the United States Agency for International Development (USAID) entered the reforms with a US$35 million facility for the Primary Education Project (PREP), which was completed in 1995. From 1997 to 2004, it financed another programme, the Quality Improvements in Primary Schools (QUIPS), at a total cost of US $53 million; US$39 million of the amount was spent on improvements in 330 schools. (See Table 5)

Figure 1: Donor share of total education spending



Source: GoG Budget Statements

Table 5: Major bilateral contributors to educational reforms

Donor	Project/Programme	Period	Budget	Activities
DFID	Whole School Development	1988-2005	UK£50 million	Support for 2 pilot schools in each district. Construction of 125 classroom blocks.
EC	Micro-projects	1990-1996 1996-2000	ECU 14.1 million ECU 9 million	Community activities with guidelines for 20.0 per cent for education; in practice about 30.0 per cent used for education (e.g., classrooms)
USAID	Primary Education Project (PREP)	1990-1995	US$35 million	US$32 million budget support plus US$3 million technical assistance.
	Quality Improvements	1997-2004	US$53 million	US$39 million for school improvements

Free, Compulsory, and Universal Basic Education (FCUBE)

In 1996, the government launched the Free, Compulsory and Universal Basic Education (FCUBE) programme in response to a constitutional requirement that such education be provided for every Ghanaian child over a ten-year period following the return to civilian rule in 1993. An FCUBE implementation unit was set up late in 1998 to manage and oversee the process. In effect, the programme became a "module" of the on-going reforms, although it had the added advantage of focusing attention on the education component of the government's larger decentralization programme, which would promote autonomy in decision making at the local level. It had the following costed components with the ultimate objectives of enhancing access and participation, teaching and learning, as well as management and supervision, especially at the local level:

1. Secial girls' programmes to bridge the gender gap in primary-school enrolment as well as special scholarship schemes and the rehabilitation or construction of school facilities.
2. Teaching materials and syllabi were to be reviewed and revised, to improve the quality of teaching and learning.
3. Incentive packages, such as annual prizes and teacher housing in rural areas were to be introduced, to boost teacher morale.

4. Distance learning methods were to be used to enhance in-service teacher training.

Broadly, the objectives of FCUBE were in line with the recommendations of the *World Declaration on Education for All*, adopted after the World Bank-UN-sponsored World Conference on Education for All, which was held in Jomtien, Thailand, in 1990. Among other things, the Declaration stated that "every person – child, youth, and adult – shall be able to benefit from educational opportunities designed to meet their basic learning needs." All countries were to achieve universal basic education (UBE) by the year 2000. It was estimated that donor assistance to education in developing countries would have to increase by about US$2.5 billion per year (1990 prices) if this ambitious goal were to be met (see Colclough with Lewin 1993: 268-9). Against this background, Ghana too expected that donor inflows for education in general and FCUBE in particular would increase.

A review of donor disbursements under the Declaration, however, showed a substantial shortfall in disbursements. Bennel and Furlong (1997) issued the following verdict on donor performance:

> …(i) in real terms, total aid for the education sector from bilateral donors was lower in the mid-1990s than before the EFA Conference; and (ii) that, while education aid from some education donors has been reallocated in favour of basic education, actual support for basic education among the main bilateral donors is very uneven and that, taken as a whole, the additional external resources that have been and are likely to be forthcoming will be insufficient to meet the basic objective of 'education for all' by the year 2000.

The Ghanaian government, however, preceded with the FCUBE programme, with various amounts of donor assistance, until it was incorporated into the Education Strategic Plan in 2003, a topic which is discussed later in the report.

Controversy over donor involvement in the reforms

The extent of donor support for the reforms has raised questions over the scope of national ownership of the reforms, with some arguing that key portions of the reforms were externally imposed by donors, especially by the World Bank and the financing was unduly burdened by a host of "arbitrary conditionality" (World Bank 2004: 20). For example, EdSAC-II included the requirement that the government keep its recurrent expenditures for basic education at 62.0 per cent of the sector's expenditure. There were also conditions that in order to ensure "cost recovery", feeding and boarding costs at the government's secondary schools be reduced and eventually abolished and that book charges should be introduced in primary schools and the proceeds put in a revolving fund. Similar conditions on boarding and feeding costs at the tertiary level were later imposed by the Bank. (*Ibid)*

The Bank, however, insists that the reforms were characterized by "strong domestic ownership" (World Bank, 2004:25). According to the Bank, there were several areas of disagreement between the Ghanaian government and donors, such as the government's insistence on vocationalising the curriculum and the Bank's opposition to it. (Palmer, 2005c). In the end, the Bank acceded to the government's desire for vocationalisation "in order to retain its position of supporting the education sector [with its staff] saying that they saw no alternative at the time". (World Bank, 2004: 25). Other conditionalities were either modified to accommodate inevitable slippages, such as the breaching of the limits on GES's hiring, or abolished completely once it became clear that full compliance may harm other aspects of the reforms – or worse.

Besides the extent of donor involvement, the increased *number of donors* and the corresponding increase in the number of their activities, outside the central government's framework for the reforms, raised fears of duplication of efforts and the likelihood of these donors operating at variance with government's priorities in the sector. For example, while the Saudi Fund focused on secondary education, the Norwegian government preferred non-formal education, the OPEC Fund concentrated on basic schools in the three Northern Regions, with the African Development Bank concentrating on the tertiary sector. Each donor adopted its own method of operations. The resulting multiplicity of project implementation

units (PIUs) inevitably put a strain on the Ministry of Education's professional and managerial capacity. In 1993, the various PIUS were merged into a single Projects Management Unit, a major move towards harmonizing donor resources within a sector-wide framework that had existed, at least in name, since the reforms, but which has never fully been developed.

Lack of intra-donor coordination in relation to the government's priorities also created tensions within the donor community. For example, while the Bank wanted to support tertiary education as a logical extension of the reforms at the basic level, most bilateral donors insisted upon concentrating on basic education only. In the event, the Bank was dismissed as "a traitor to the Education for All" agenda (see discussion below).

Summary

Ghana's attempts at education reforms date back to pre-independence days, with the introduction of the Accelerated Development Plan for Education in 1951, which made primary education free. Ten years later, the Education Act made primary education compulsory. The resulting increase in enrolment affected quality, which led to a series of reforms in the early 1960s to improve quality while enhancing access. Political instability, however, hampered the effective implementation of these reforms. It was not until the late 1980s, following the introduction of the economic recovery programme under yet another military government, that a new round of reforms was launched that would last for more than 20 years. The reforms, based largely on recommendations from committees under previous governments, sought to shorten the length of pre-tertiary education while improving the content of education at all levels.

Donors played an important – and sometimes controversial – role in these reforms, offering both financial and technical assistance. Their tendency to pursue projects and programmes outside the government's framework has been a source of dissatisfaction within government. Nevertheless, donors have continued to play a major if not a dominant role in the country's education sector, especially at the primary school level.

Chapter 3: Financing education in Ghana

The economy and fiscal space

As noted earlier, the Ghanaian economy was in a state of near disintegration at the time both educational and wider economic reforms were launched in the mid-1980s. Economic growth in each of the three years leading to the introduction of the ERP in 1983 had been negative, fuelled in part by a nation-wide drought and bush fires, as well as a decade of declining investment and a consequent stagnation, even decline, in some years, of output (see Figure 2). Gross fixed capital formation, as a share of GDP, had declined from a high of 12.0 per cent in 1970 to 3.8 per cent by 1983. The broad industrial sector shrank by an average of 15.0 per cent per year between 1981 and 1983, with manufacturing, the largest sub-sector of industry, declining by as much as 36.3 per cent in 1982. With an exchange rate over-valuation of 816.0 per cent, Ghana's exports, mainly cocoa, became non-competitive on world markets, leading to a virtual collapse of the external sector. Meanwhile, consumer inflation, which had averaged 40.0 per cent per year during the 1970s, reached as high as 123.0 per cent in 1983, further ravaging the purchasing power of both workers' earnings and government revenue (Ghana Statistical Service Annual Report:1984 Issue).

The introduction of the ERP – and the fortuitous return of the rains in 1984 – provided the basis for a dramatic turnaround in the country's economic fortunes, with the economy consistently growing at a positive rate since 1984. By 2004, gross capital formation had reached a high of 27.9 per cent of GDP, with broad industry growing at an average annual rate of 5.8 per cent and manufacturing at 5.6 per cent, followed by services at 5.3 per cent. Agriculture, the largest contributor to GDP, has lagged somewhat with an average annual growth of 3.5 per cent due mainly to episodes of exceptionally low or even negative growth. Nevertheless, the overall economy has posted average annual growth rates of 4.9 per cent since the reforms.

With respect to the external sector, a combination of trade reforms, including the successive devaluation of the cedi against the US dollar and the reduction or removal of import tariffs, combined with a surge in donor inflows, has helped to improve performance. After reaching their lowest point in 1983, the indices for merchandise exports and imports have followed an upward, if erratic; trend since then, with the index for the former rising cumulatively by 549.0 per cent over the period and that of the latter rising by 792.9 per cent. Imports especially have been fuelled by the lower trade tariffs and increased foreign aid, which has increased government consumption (see Figure 3).

Figure 2: Trends in economic growth since 1984

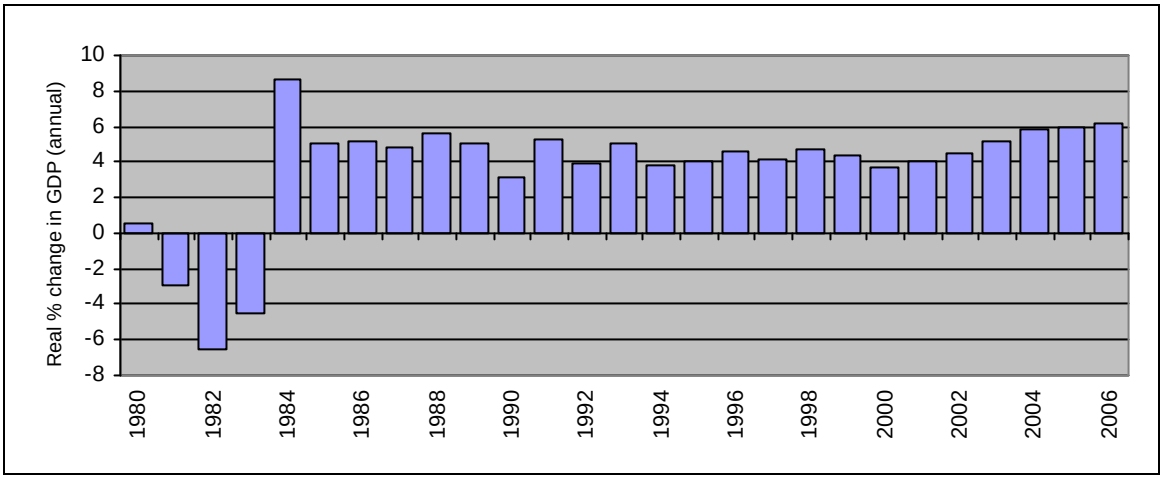
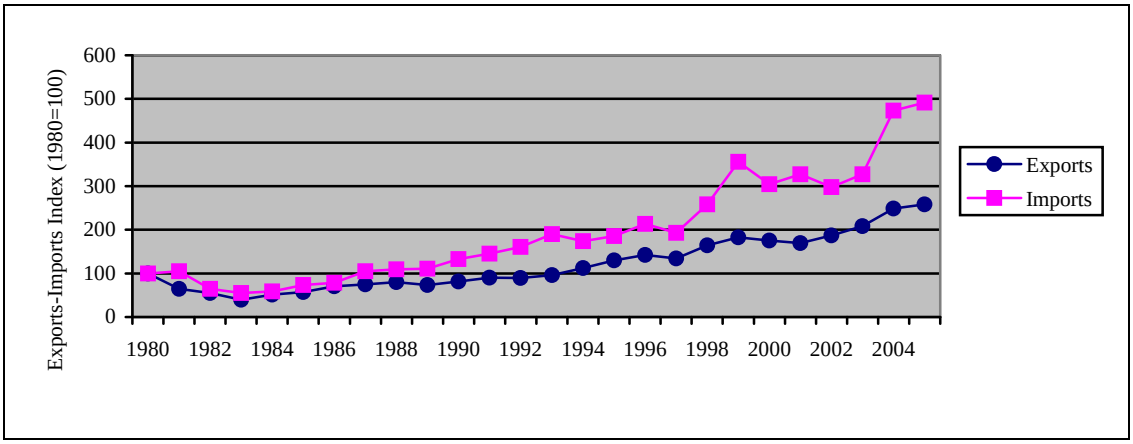
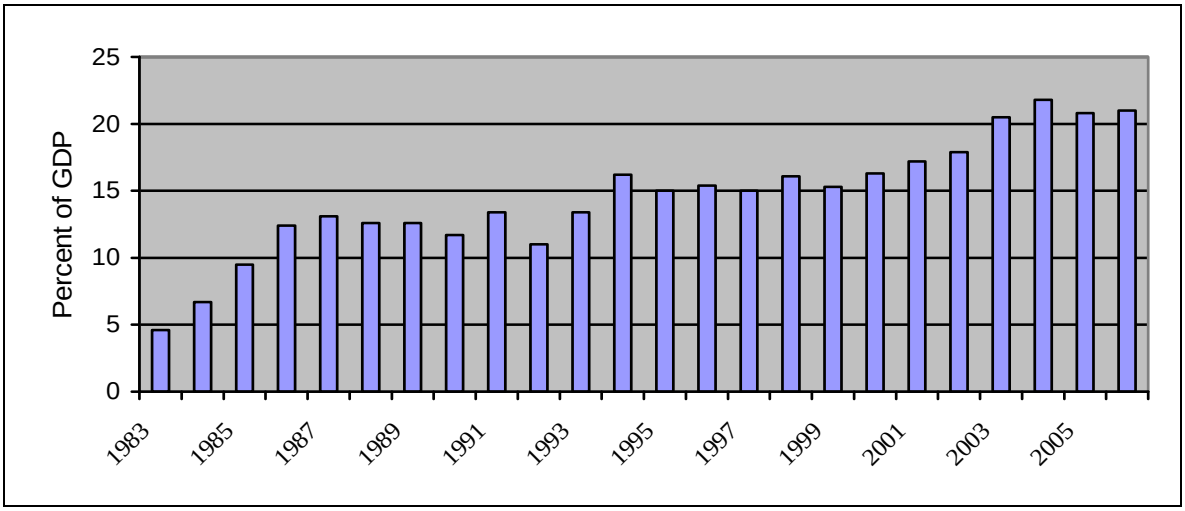


Figure 3: Trends in international trade indices (1980=100)



The improvement in economic performance has translated into a relatively strong revenue position for the government. Total tax revenue as a share of GDP has risen steadily from just under 5.0 per cent in 1983 to 21.0 per cent as of 2006, creating the fiscal space for government to increase expenditure, including that of education (see Figure 4). The period 1999 to 2006, for which there is consistent data, experienced rapid growth in government spending, with overall expenditure, adjusted for inflation, rising from US$2,202 million in 1999 to US$4,246 million in 2006, measured in 2006 prices.[14] Capital spending nearly doubled from US$704.4 to US$1,266.5, while that of the broader social sector, including education, shot up from US$435.9 million to US$1,075.3 million, driven largely by HIPC resources.

Figure 4. Tax revenue as a share of GDP (%)



Diversified sources of education finance

While both donor and central-government financing of education has increased over the course of the reforms, the need for additional resources for the sector has caused the government to explore other sources of financing in more recent years. Of the US$1.0 billion that was spent on the education sector in 2006, about 30.0 per cent (US$307 million) came from non-donor and non-GoG sources, such as the

[14] The discussion in this section covers various period between 1997 and 2006, depending on data availability, consistency and relevance.

GETFund, District Assemblies Common Fund (DACF) and internally generated funds (IGF). This contrasts sharply with the situation in 1999, when GoG and donors accounted for all of the US$384.5 million spent on the sector (see Table 6). Worthy of note are the Ghana Education Trust Fund (GETFund) and the District Assembly Common Fund which are statutory funds from the Value Added Tax (VAT) and the central government's general revenue. The diversification of education funding sources was prompted in part by the erratic disbursement of donor commitments to the Ghana Education Service and the Education Ministry in general. In 2006, for example, donor pledges amounted to US$80.3 million but only US$24.5 million was disbursed, causing the GES to state that this "poor execution rate with respect to donor resources… has drastically affected the Ministry's execution rate [of its budget].[15]

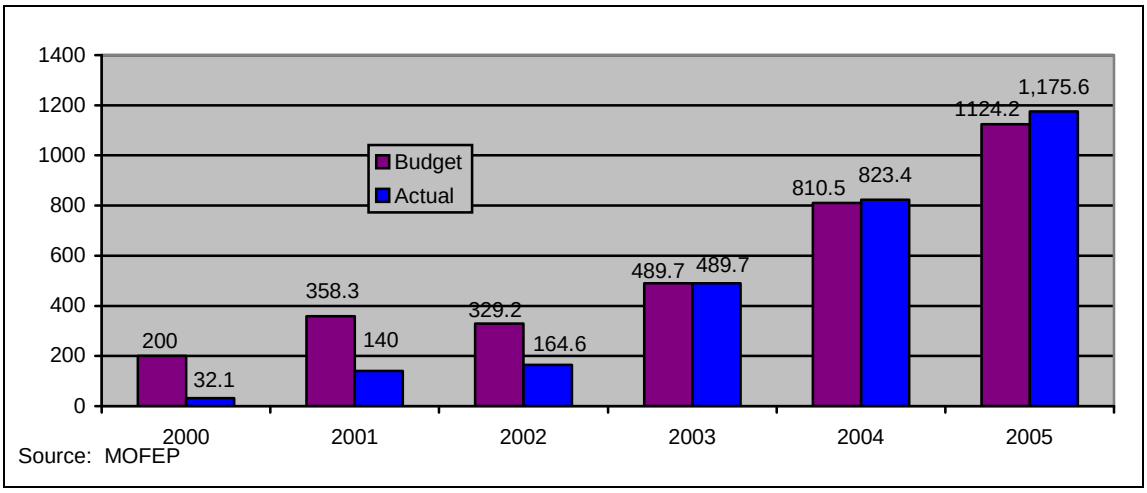
Table 6: Sources of education financing since 1999

	1999	2000	2001	2002	2003	2004	2005	2006
	In milions of US dollars (at 2006 prices)							
GoG	350.5	342.0	385.2	472.3	525.6	541.6	586.7	706.3
Donor	34.0	18.7	27.3	39.4	28.6	58.1	74.8	24.5
IGF	-	-	-	-	-	73.0	83.4	111.4
GETFund	-	-	-	-	62.3	75.8	86.5	125.5
HIPC	-	-	-	-	17.6	37.9	37.8	48.5
DACF	-	-	-	-	7.0	14.5	10.4	15.1
EFA Catalytic	-	-	-	-	-	-	4.2	3.0
SIF	-	-	-	-	-	-	5.7	3.7
Total	384.6	360.7	412.5	511.7	641.2	800.9	889.5	1,038.1
GoG-Donor Total	384.6	360.7	412.5	511.7	554.3	599.7	661.5	730.8

Source: GES Annual Education Sector Review Report, various issues. Dollar conversion by AFC.

The GETFund law was passed in 2000 and the Fund was to be financed from 20.0 per cent of revenue from the Value Added Tax (VAT). Figure 5 shows that allocations to the fund have risen steadily over the years and that since 2003, actual disbursements have either matched budgetary allocations or exceeded them.

Figure 5: GETFund allocations since 2000 (in billions of current cedis)



[15] Education Sector Annual Performance Report 2007, p.79; p.95. The levels of donor disbursements often differ according to the source of the data and classifications used. For example, donor data on the "education" sector comprises direct funding to the Ministry of Education and indirect funding to the Ministry for Manpower, while data for GES may reflect only the portion disbursed there of.

The District Assembly Common Fund (DACF), which came into being with the 1992 Constitution, is financed from a constitutionally mandated 5.0 per cent of central government revenue that is to be disbursed to district assemblies to supplement their development expenditures. The law establishing the Fund recommends that 20.0 per cent of the allocation (implying 1.0 per cent of total central government revenue) be invested in educational infrastructure, particularly for basic education, at the local level.

Government financing (sectoral)

Between 1999 and 2006, education-sector expenditure, as a share of GDP, rose from 5.0 per cent to 5.7 per cent, having dipped to an average 4.6 per cent between 2000 and 2001, when a downturn in the economy led to a general reduction in overall government expenditure.

Table 7: Expenditure by Level of Education – GoG. (Mil. of US$ in 2006 prices)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Pre-school		-	-	-	-	-	14.9	31.6	29.9	36.5
Primary School	89.8	88.9	101.3	109.9	131.9	165.0	227.9	228.0	237.5	258.2
Junior Secondary School	53.0	50.5	65.2	65.9	77.9	96.8	133.9	114.1	148.0	163.9
Senior Secondary School	33.6	32.2	39.8	45.0	43.7	58.2	98.1	159.4	184.1	146.1
TVET	2.2	2.5	2.6	2.8	3.6	4.1	7.0	8.8	10.0	8.8
SPED	-	-	-	-	-	-	2.6	3.2	3.6	4.2
NFED	-	-	-	-	-	-	2.2	12.8	16.8	6.7
Teacher Education	10.4	12.2	19.3	17.1	17.3	18.9	25.6	29.6	33.7	33.3
Tertiary	30.8	31.4	41.5	42.6	44.3	57.1	89.1	159.0	158.3	224.2
Management and Supervision	2.4	2.5	2.4	1.7	2.5	3.2	0.6	4.0	8.7	80.0
HIV-AIDS	-	-	-	-	-	-	0.6	1.6	0.9	0.8
Total	222.1	220.2	272.1	285.1	321.3	403.2	602.4	752.2	831.4	962.8

The changing nature of the components of total GoG expenditures on education (for example, the inclusion of "pre-school" financing in "primary school" until 2003, or the introduction of an "HIV-AIDS" category that same year) renders any share analysis misleading, as the denominators would no longer be comparable over the years of interest. For example, the "decline" of primary school's share of expenditures from 40.4 per cent in 1997 to 26.8 per cent in 2006 ignores the fact that by 2006, pre-school expenditures, which were part of "primary school" expenditures in 1997, had been put into a separate category. Once the 3.8 per cent "pre-school" share in 2006 is added to that of primary school to ensure comparability with 1997, the new figure of 30.6 per cent shows a less pronounced fall in primary schools' share of expenditures than the disaggregated version does (see Table 7).

A trend analysis of real growth rates also shows wide swings, perhaps influenced by particular policy interventions, over the period. For example, after falling by about one percent in 1998 (the nominal growth rate for the year was a *positive* 13.6 per cent), overall sectoral expenditures recovered to 23.6 per cent in 1999, followed by a steep deceleration to 4.8 per cent and then another recovery which peaked at 49.4 per cent in 2003 before easing to 15.8 per cent in 2006. The annual average for the period was 18.5 per cent. More extreme cases are observed for "management and supervision" and "teacher education." Primary education expenditures also varied widely, with an annual average of 13.1 per cent, compared to 27.3 for tertiary education.

Overall, however, it does not appear that spending on education has kept pace with enrolment rates. As shown in Table 8, per capita spending at all levels of education has varied widely over the last five years in terms of growth rates. In 2005, for example, following two successive years of intra-sectoral growth, per capita spending declined at every level of the educational system, except teacher education. In

2006, this anomaly was addressed and the growth turned positive for every category. In absolute terms, teacher education and the wider tertiary sectors have continued to have the highest per capita expenditures of any category of education.

Table 8: Real per capita education expenditures, in US$, 2006 prices

	2002	2003	2004	2005	2006
Pre-school	69.31	27.20	58.60	38.73	39.14
primary	82.68	101.96	95.79	77.28	102.86
JSS	161.55	170.80	143.19	116.72	172.58
SSS	267.88	277.69	358.51	203.49	277.05
SPED	685.90	549.54	1,358.61	663.75	903.94
Teacher Education	1,037.57	1,296.80	1,173.55	1,219.87	1,225.21
TVET	427.47	305.72	402.78	298.89	516.25
Tertiary	1,170.10	1,384.84	1,366.45	849.76	1,337.32
Real percent change					
Pre-school		(60.76)	115.47	(33.92)	1.07
primary		23.32	(6.06)	(19.32)	33.10
JSS		5.73	(16.17)	(18.49)	47.86
SSS		3.66	29.10	(43.24)	36.15
SPED		(19.88)	147.23	(51.14)	36.19
Teacher Education		24.98	(9.50)	3.95	0.44
TVET		(28.48)	31.75	(25.79)	72.72
Tertiary		18.35	(1.33)	(37.81)	57.38

Sources: ESPR 2006 & 2007. Applies to public institutions only.

HIPC and the new framework for aid

In the mid-1990s, the IMF and the World Bank designated Ghana as one of the 41 Heavily Indebted Poor Countries (HIPC) that required special assistance to bring down "unsustainable" debt levels, foster faster growth and thus help bring down poverty. To qualify for assistance, however, a country had to prepare and implement a Poverty Reduction Strategy Paper (PRSP), with the assistance and guidance of the Fund and the Bank. In 2000, Ghana submitted an "Interim-Poverty Reduction Strategy Paper" to them and in 2001, following a change in government and amidst much controversy over the label HIPC – which some people deemed demeaning to Ghanaians – the country opted for HIPC debt relief and proceeded to prepare the Ghana Poverty Reduction Strategy (GPRS).

The PRSPs subsequently became the framework within which donors (with the exception of the United States and Japan) extended assistance to developing countries.[16] To address recipient-country concerns over the erratic disbursement of aid and its disruptive effects on policy implementation, the donors, with the aggressive advocacy of the United Kingdom, adopted a Multi-Donor Budget Scheme (MDBS) as a medium for collectively channelling aid to developing countries, subject to certain conditions.[17] In the 2002 budget statement to Parliament, the minister of finance announced the introduction of MDBS and said that would help the government to deal with "short-falls in donor inflows"

[16] The US and Japan sat out on the grounds that their national laws forbade participation in donor schemes for which monies could not be directly accounted.

[17] In 2000, the UK's DfID, in a white paper entitled *Eliminating Poverty: Making Globalisation Work for the Poor*, had advocated "direct budget support" (DBS) to reduce the "proliferation of donor conditionality" and enable donors to "focus their support on the government's implementation of its poverty reduction strategy" while at the same time enabling donors to "provide governments with greater certainty about donor flows over the medium term…". This position was adopted by the Rome Declaration of 2003 by donors and recipient governments alike.

and ensure that donors "disburse funds directly into the Consolidated Fund to support government's implementation of the Ghana Poverty Reduction Strategy through the budget."

Table 9 shows trends in foreign aid under GPRS/MDBS since 2003, when the GPRS was launched.[18] Under GPRS-I, overall aid increased by an annual average of about 12.0 per cent in nominal terms, although there were substantial declines and increases in certain categories. Aid to "public sector reforms", for example, fell by 34.3 percent in 2004 and then seized up altogether in 2005, while those of education rose by 20.3 per cent and 68.3 per cent in 2004 and 2005, respectively. It is noteworthy that the grant component of MDBS in the last year of GPRS-I, while the credit component rose by 62.2 per cent. This has implications for the country's future debt sustainability. (In 2006, the government also received the first disbursement of US$154.4 million from a parallel debt relief initiative, the Multilateral Debt Relief Initiative (MDRI) from the World Bank, the IMF and the African Development Bank. The total relief between 2006 and 2009 is expected to amount to US$521.3 million).

[18]The first phase of the GPRS spanned 2003-2005; the second phase, re-named *Growth* and Poverty Reduction Strategy spans four years (2006-2009), on the assumption that a new government in 2009 would need the additional year as a transition to any next phase.

Table 9: Aid disbursements under GPRS/MDBS (millions of US$, %), 2003-2007

	GPRS-I				GPRS-II*	
	2003	**2004**	**2005**	**2003-2005**	**2006**	**2007****
IMF Balance of Payments support to Bank of Ghana	73.8	39.0	78.0	190.9	76.8	NA
Budget Support (MDBS)	264.3	310.9	290.6	865.8	331.5	290.3
Credits	129.6	105.6	171.2	406.4	184.5	131.9
Grants	134.7	205.3	119.4	459.4	147.1	158.4
Sector and Investment Support	544.9	637.1	727.7	1,909.7	888.1	951.7
Credits	172.8	224.3	240.9	638.0	315.1	334.5
Grants	372.1	412.7	486.8	1,271.7	573.0	617.2
of which Ghana Poverty Reduction Strategy:						
Pillar 1: Private Sector Competitiveness	236.8	293.8	336.8	867.4	468.7	585.4
Agriculture	92.5	103.1	94.0	289.6	180.8	202.9
Private and Financial Sector Development	37.2	37.1	53.0	127.3	86.8	92.7
Energy	8.0	9.1	20.4	37.5	26.9	81.0
Other Infrastructure (mainly Roads)	99.2	144.4	169.4	412.9	174.2	208.8
Pillar 2: Human Development and Basic Services	270.9	297.1	346.7	914.7	339.2	293.9
Health (incl. HIV/AIDS)	160.9	184.5	185.0	530.4	155.5	110.2
Education	**47.6**	**57.2**	**96.3**	**201.2**	**93.2**	**57.0**
Water and Sanitation	62.4	55.3	65.3	183.1	90.4	126.8
Pillar 3: Good Governance and Civic Responsibility	37.2	46.2	44.2	127.7	80.2	72.3
Public Financial Management	5.7	2.0	2.7	10.4	8.6	7.5
Public Sector Reform	6.5	4.5	0.0	11.1	5.2	6.0
Decentralization	8.8	11.8	18.2	38.8	28.9	27.5
Other Governance (incl. M&E)	16.2	27.9	23.3	67.4	37.6	31.3
Total Disbursements	883.1	987.0	1,096.3	2,966.4	1,296.4	1,242.0
	Percentage shares					
IMF Balance of Payments support to Bank of Ghana	100.0	100.0	100.0	100.0	100.0	NA
Budget Support (MDBS)	100.0	100.0	100.0	100.0	100.0	100.0
Credits	49.0	34.0	58.9	46.9	55.6	45.4
Grants	51.0	66.0	41.1	53.1	44.4	54.6
Sector and Investment Support	100.0	100.0	100.0	100.0	100.0	100.0
Credits	31.7	35.2	33.1	33.4	35.5	35.1
Grants	68.3	64.8	66.9	66.6	64.5	64.9
of which Ghana Poverty Reduction Strategy:						
Pillar 1: Private Sector Competitiveness	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	39.0	35.1	27.9	33.4	38.6	34.7
Private and Financial Sector Development	15.7	12.6	15.7	14.7	18.5	15.8
Energy	3.4	3.1	6.1	4.3	5.7	13.8
Other Infrastructure (mainly Roads)	41.9	49.1	50.3	47.6	37.2	35.7
Pillar 2: Human Development and Basic Services	100.0	100.0	100.0	100.0	100.0	100.0
Health (incl. HIV/AIDS)	59.4	62.1	53.4	58.0	45.8	37.5
Education	**17.6**	**19.3**	**27.8**	**22.0**	**27.5**	**19.4**
Water and Sanitation	23.0	18.6	18.8	20.0	26.7	43.1
Pillar 3: Good Governance and Civic Responsibility	100.0	100.0	100.0	100.0	100.0	100.0
Public Financial Management	15.4	4.2	6.1	8.2	10.7	10.3
Public Sector Reform	17.5	9.8	0.0	8.7	6.4	8.3
Decentralization	23.6	25.5	41.1	30.4	36.0	38.0
Other Governance (incl. M&E)	43.4	60.5	52.8	52.8	46.9	43.3
Total Disbursements	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank (Ghana Office) * Spans 2006-2009; ** Preliminary data.

Table 10 shows a breakdown of aid to the education sector alone under GPRS/MDBS. Aid levels from most of the major donors, except the United Kingdom and the EU, increased over the period. A steep increase in World Bank contribution from US$3.1 million in 2003 to US$24.3 million in 2005 (a nominal growth of nearly 700.0 per cent) increased its share of total education-sector aid from 6.6 per cent to 25.3 per cent over the period, while reducing that of major donors like the United Kingdom and the United States substantially.

Table 10: Aid to education by source under GPRS (levels and % shares), 2003-2005

	2003	2004	2005	2003-2005	2003	2004	2005	2003-2005
	(In millions of current US$)				Percent share			
Total	47.6	57.2	96.3	201.2	100.0	100.0	100.0	100.0
Credits	3.1	11.0	24.7	38.5	6.6	19.2	25.6	19.1
Grants	44.5	46.2	71.7	162.4	93.4	80.8	74.4	80.7
World Bank	3.1	11.0	24.3	38.5	6.6	19.2	25.3	19.1
ADB	-	-	0.3	0.3	-	-	0.4	0.2
EU	4.2	1.3	2.9	8.4	8.7	2.3	3.0	4.2
France	0.9	1.1	1.3	3.2	1.8	1.9	1.3	1.6
Germany	0.4	0.2	0.2	0.8	0.8	0.3	0.2	0.4
Japan	1.5	1.1	6.4	8.9	3.1	1.9	6.7	4.4
Netherlands	2.4	3.7	7.3	13.4	5.1	6.4	7.6	6.7
Spain	-	-	15.0	15.0	-	-	15.6	7.5
United Kingdom	14.7	15.7	13.8	44.3	30.9	27.5	14.4	22.0
United States	17.5	18.2	19.2	54.9	36.8	31.7	20.0	27.3
ILO	-	0.1	0.1	0.2	-	0.2	0.1	0.1
UNESCO	0.1	0.4	0.4	1.0	0.3	0.7	0.5	0.5
UNICEF	1.5	1.7	1.9	5.1	3.2	3.1	1.9	2.5
UNDP	0.9	1.1	1.8	3.7	1.8	1.9	1.9	1.9
WFP	0.5	1.7	1.2	3.4	1.0	3.0	1.2	1.7

Source: World Bank - Accra

The distribution of donor assistance across sectors of education has also varied in recent years, possibly as a result of changing donor and GoG preferences. For example, donor share of primary education financing has fallen steadily from nearly 70.0 per cent in 2003 to just under 40.0 per cent in 2006 (although the absolute levels have risen in real terms by about 5.0 per cent). However, donor activity in the basic education sub-sector (pre-school, primary and JSS) has remained largely consistent. Besides a decisive shift in resources to JSS in 2004, which raised the donor share from 22.4 per cent the previous year to 35.5 per cent and reduced the primary sector's share from 76.3 per cent to 63.5 per cent, aid to pre-school and primary together has remained over 70.0 per cent of the total (see Table 11).

Table 11: Donor financing of education by sector (constant US$, % shares)

	2003		2004		2005		2006	
	Level	% Share	Level	% Share	Level	% Share	Level	% Share
Pre-school	0.44	1.1	0.40	0.8	0.35	0.6	3.97	5.3
Primary School	26.65	68.8	25.11	51.5	28.46	49.0	27.88	37.0
Junior Secondary School	7.84	20.2	14.03	28.8	10.36	17.8	10.32	13.7
Senior Secondary School	-	-	-	-	0.91	1.6	17.70	23.5
TVET	0.09	0.2	-	-	0.69	1.2	0.57	0.8
SPED	-	-	-	-	-	-	-	-
NFED	3.61	9.3	-	-	0.15	0.3	0.63	0.8
Teacher Education	0.09	0.2	-	-	1.00	1.7	2.82	3.8
Tertiary	-	-	9.21	18.9	16.06	27.6	9.52	12.6
Management and Supervision	-	-	-	-	0.15	0.3	-	-
HIV-AIDS	-	-	-	-	-	-	1.87	2.5
Total	38.72	100.0	48.74	100.0	58.11	100.0	75.27	100.0
	Basic-education sector only							
	2003		**2004**		**2005**		**2006**	
	Level	% Share	Level	% Share	Level	% Share	Level	% Share
	Level	% Share	Level	% Share	Level	% Share	Level	% Share
Pre-school	0.44	1.27	0.40	1.02	0.35	0.91	3.97	9.43
Primary School	26.65	76.30	25.11	63.50	28.46	72.65	27.88	66.11
Junior Secondary School	7.84	22.43	14.03	35.48	10.36	26.45	10.32	24.47
Total	34.93	100.00	39.54	100.00	39.17	100.00	42.17	100.00

Source: Ghana Educatioin Service

Summary

As the Ghanaian economy recovered in the late 1980s, government revenue steadily began to increase and with that an enhanced capacity to finance the education sector. Despite this relative improvement, education sector expenditure, as a share of GDP, is lower than it was in the mid-1970s. At the same time, however, government has introduced other sources – besides its purse and that of donors – to finance the sector. The sources include the GETFund, the DACF, as well as Internally Generated Funds (IGF). With the government's adoption of the HIPC debt relief initiative, the sector has benefited substantially in recent years from additional donor "inflows" in the form of debt relief.

Increasingly, government, with some donor support, has been devoting more resources to the non-basic education sector over the past decade, leading to a decline in the share of education expenditure going to basic education as the shares for secondary and tertiary increase.

Chapter 4 'Outcomes' of the Reforms

The first major attempt to assess the impact of the 1987 educational reforms was proposed by President Jerry Rawlings to Parliament in January 1999. Noting that a review of the reforms was required after 10 years of implementation, he stated in his state of the nation address to the law-making body:

> …Clearly, there have been significant advancements even if achievement levels in English and maths have been rather low in some primary schools. We hope through a dispassionate review, embracing all interested parties, to address the problems and difficulties encountered along the way and together fashion out strategies to raise the quality of education."

The president's exhortation was followed by the National Education Forum in November 1999, followed by the Education Sector Review in 2002, the Presidential Commission report, and five years later by the World Bank report, *Books, Building, and Learning Outcomes.* Other reports, mostly evaluative studies commissioned by donors to assess their activities, have also been produced over the years. This section of the report draws on the various reports, along with data and information obtained from GES and other sources, including donors and the Government of Ghana.

Broader objectives of reforms

Within the first 10 years of its implementation, the reforms achieved their broader objective of reducing the length of pre-tertiary education from 17 to 12 years, but not without some difficulties. Until the recent educational reforms, which go into effect in September 2007 and will extend SSS from three to four years, the first reforms transformed the system into nine years of basic education (six years primary and three years JSS), followed by three years of secondary schooling before tertiary education.

The attempts to "vocationalise" basic education with the introduction of pre-vocational and pre-technical education, however, appear to have been largely a failure. A government assessment made the following observation:

> The content of the vocational and technical subjects (in JSS and SSS) and courses (in technical institutes) continues to be almost all theoretical with little or no practical activity. A major deficiency in the educational reform programme is the lack of skills development even if at varying levels of emphasis. The lack of teaching/learning time allocation and resources as well as qualified and experienced technical/vocational teachers are the major causes of this deficiency. Another major drawback is the lack of linkages between the different levels of education.[1]

Trends in number of schools

Between 1987 and 2006, the combined number of private and public primary schools increased from 9,569 to 15,307, while that of JSS rose from 5,260 to 8,749. For the same period, the number of secondary schools also increased from 239 to 506. Across all three sectors, however, private schools grew faster to account for about 1 out of every 4 schools. For example, the proportion of private primary schools increased from 1.5 per cent to 25.2 per cent; JSS from zero percent (2.4 per cent in 1991) to 22.7 per cent, and SSS from 9.7 per cent in 1991 to 22.8 per cent in 2006 (see Table 12 and Annex 16). The sharp rise in private schools may reflect the growing perception that the public schools have deteriorated in quality, despite having the highest proportion of trained teachers and higher salaries than private schools.

[1] http://www.edughana.net/history_levels.htm. Accessed July 15, 2007.

Table 12: Growth in number of schools

	1987/1988	1991/1992	1997/1998	2002/2003	2003/2004	2004/2005	2005/2006
Primay Schools							
Public	9,424	11,142	11,236	11,747	11,895	12,406	12,227
Private	145	570	1,090	2,224	2,724	3,622	3,080
Total	9,569	11,712	12,326	13,971	14,619	16,028	15,307
% Private	1.5	5.1	9.7	18.9	22.9	29.2	25.2
Junior Secondary Schools							
Public	5,260	5,263	6,020	6,266	6,304	6,637	7,130
Private		128	449	1,015	1,322	1,786	1,619
Total	5,260	5,391	6,469	7,281	7,626	8,423	8,749
% Private	-	2.4	7.5	16.2	21.0	26.9	22.7
Senior Secondary Schools							
Public	239	413	NA	NA	NA	NA	412
Private		40	-	NA	NA	NA	94
Total	239	453	-	NA	NA	NA	506
% Private	-	9.7	-	NA	NA	NA	22.8

Source: National Education Forum, 1999; GES EMIS

Growth in enrolment

Primary schools

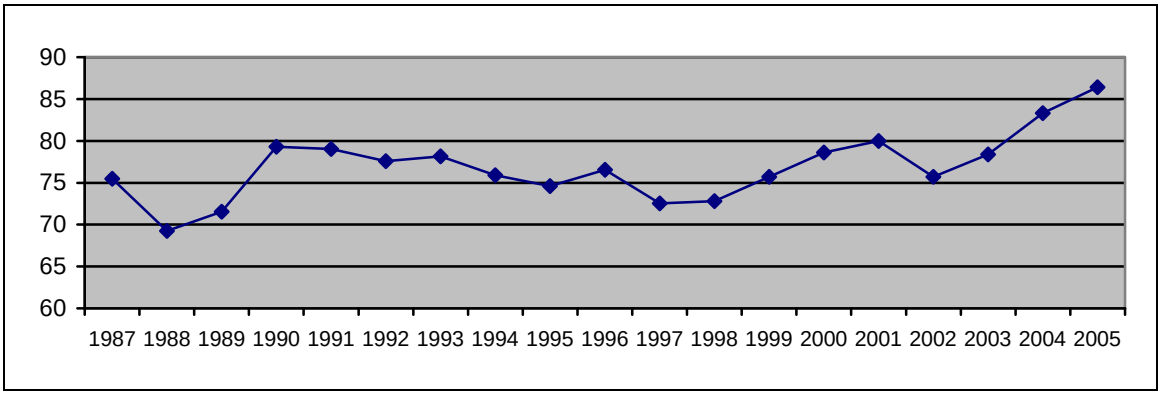
Indicators of enrolment show a mixed picture of performance over the period of reforms. The number of primary school pupils, for instance, increased from 1.7 million to 3.1 million between 1987 and 2006. The gross enrolment ratio (GER), however, remained essentially stagnant for the better part of the reforms, following some initial improvements. After rising from 74.5 in 1987 to 79.3 in 1990, the ratio began to decline, such that by the 10th anniversary of reforms, it was lower, at 72.5, than it was at the time the reforms were initiated. It is significant to note that the onset of the decline in the GER in 1990 coincided with increases in book fees, a World Bank loan conditionality, of about 70.0 per cent (from ¢150 the previous year to ¢250). (World Bank, 2004: 168). This and subsequent increases in these fees may thus have dampened the access-boosting component of the reforms.

Table 13: Primary school enrolment levels, millions (1988-2006)

1987	1992	1996	2,000	2,001	2,002	2,003	2,004	2,005	2,006
1.68	2.05	2.33	2.38	2.48	2.59	2.52	2.69	2.93	3.12

Source: World Bank 2004; EMIS various issues

Figure 6: Primary schools gross enrolment ratios (1987 -2006)



The primary school GER crossed the 80.0 mark for the first time in 2001 but it declined again in the subsequent two years, before rebounding to 83.3 in 2004/2005. Mainly as a result of the introduction of the capitation grant in the 2005/2006 academic year, the GER increased to 86.4. Regional-level data suggests that the grant may have had greater impact on some of the poorest regions in the country, namely the Upper East, Upper West, and Northern Region. The higher-than-100 ratios for Central Region (another poverty endemic region, according to the Fourth Ghana Living Standards Survey) and Upper West is an indication of a preponderance of "over-aged" pupils in primary schools.

Figure 7a: Gross enrolment ratio in primary schools by region – 2001/02 vs. 2005/06

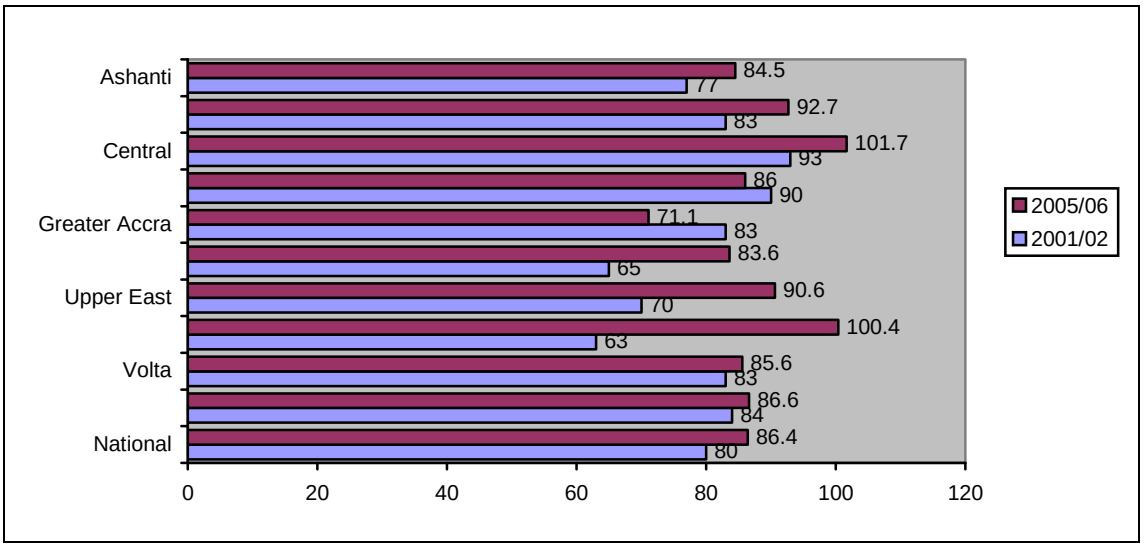
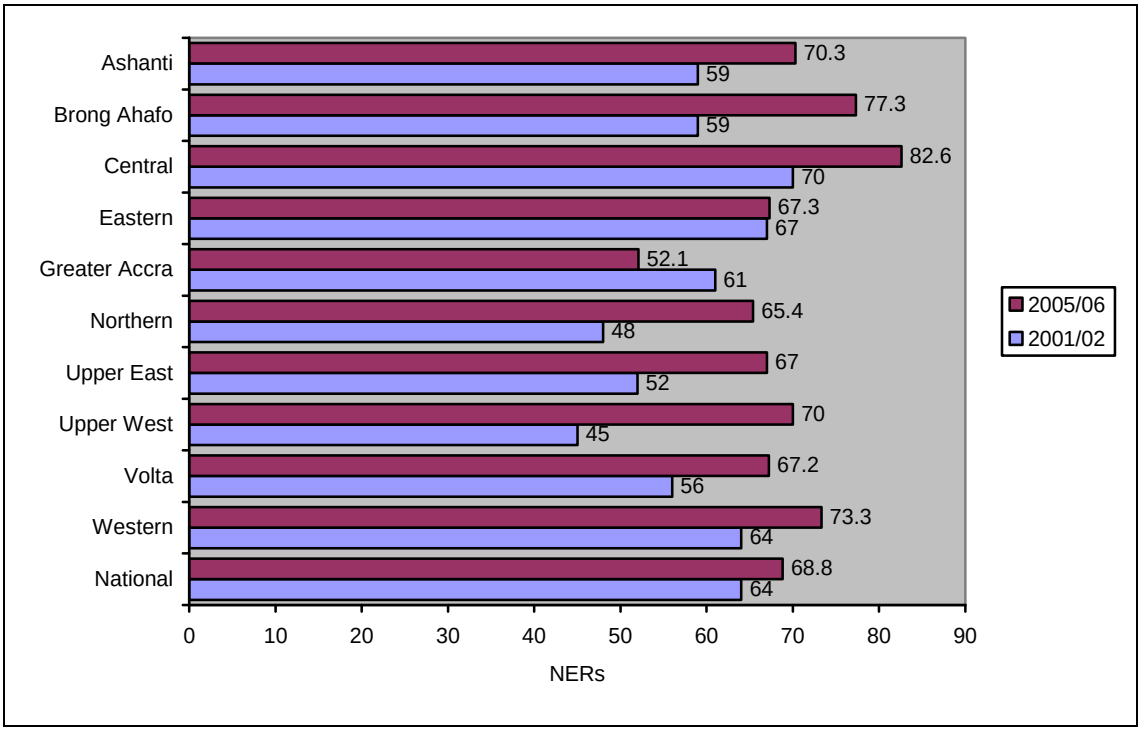


Figure 7 b: Net enrolment ratio in primary schools by region – 2001 vs. 2005



Junior Secondary Schools

The GER for JSS reflects the teething problems that the reforms encountered in the early years. The ratio dropped steadily from 64.1 at the time the reforms were initiated to about 55.5 in 1990, before recovering but it stayed below 60.0 in 2000. Thereafter, it grew rapidly, reaching 70.4 by the 2005/2006 academic year, although that is only 6.3 points higher than the ratio in 1987.

Figure 8: JSS gross enrolment ratios (1987 to 2006)

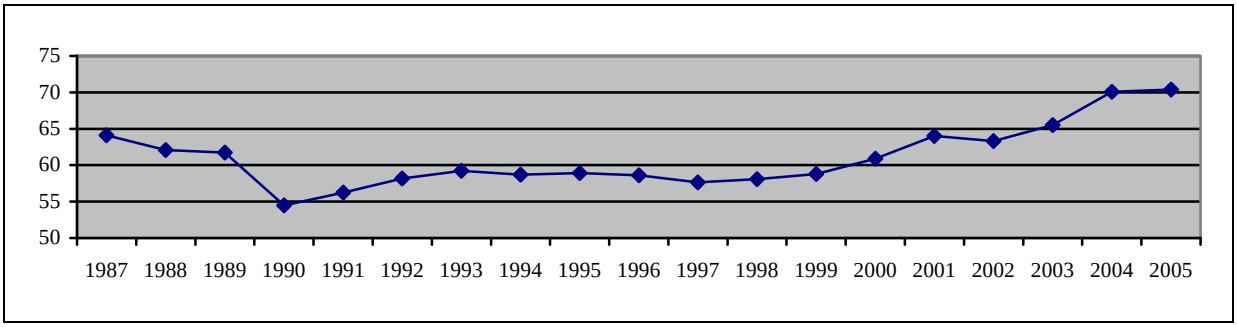


Figure 9a: Gross enrolment ratio for JSS by region, 2001 vs. 2005

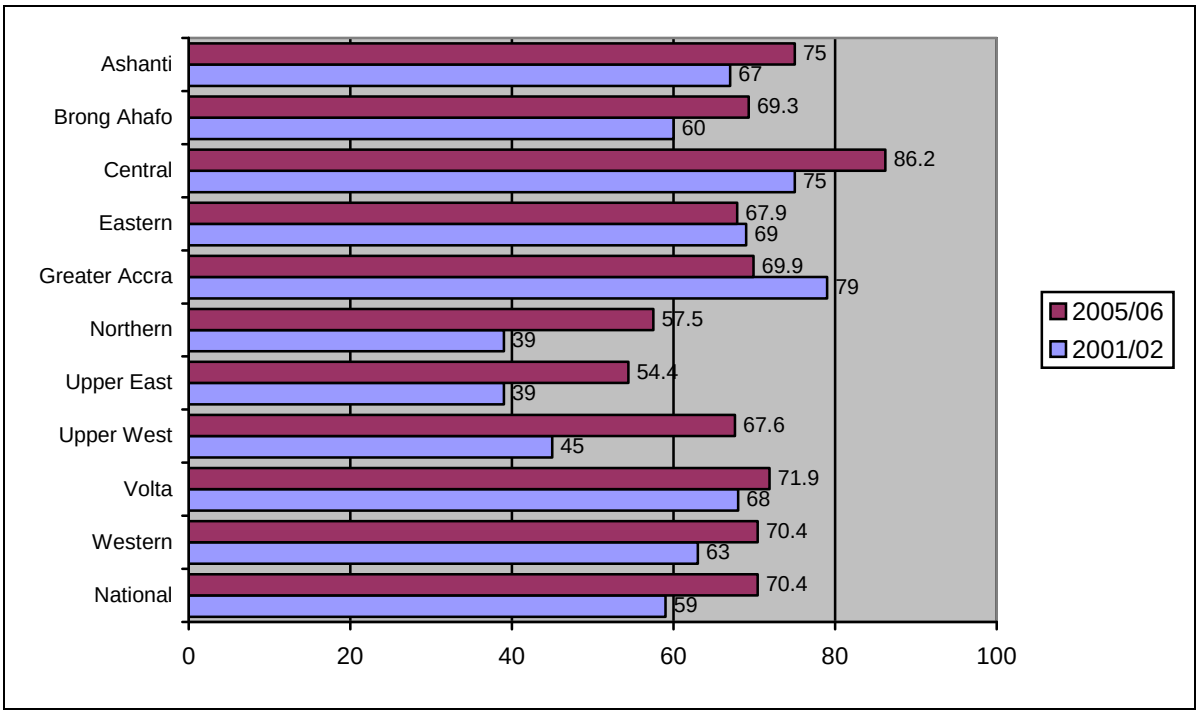
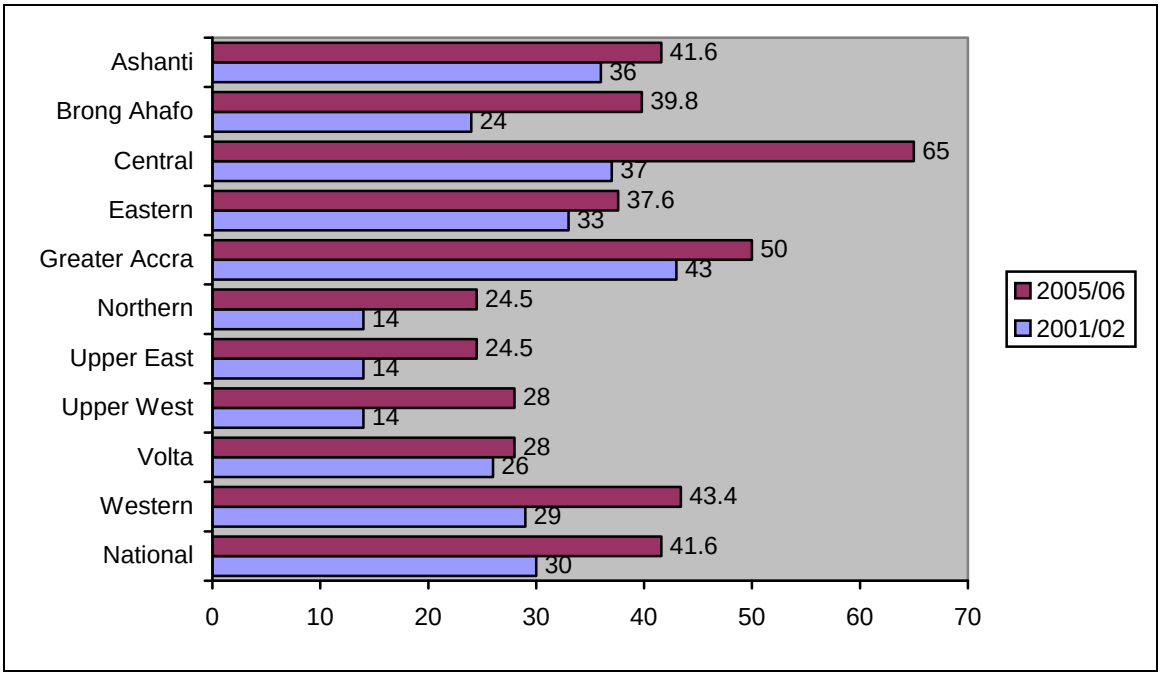


Figure 9b: Net enrolment ratios for JSS by region, 2001 vs. 2005



Regional patterns in enrolment

The consistently lower NER is an indication that fewer children are enrolled in classes appropriate for their age, although the gap between GER and NER narrowed somewhat in 2005, most likely due to the introduction of the capitation grant, which boosted enrolments in most parts of the country. The situation is somewhat similar for the JSS level, where the gap between GER and NER narrowed in 2005, after widening in 2003 and 2004.

A major characteristic of the Ghanaian Education system is the disparity between gross and net enrolment ratios on a regional basis. According to the MOESS's latest Education Sector Analysis (MOESS: 2006): there was a narrowing in primary school GER between the 40 most deprived district and other districts across the country. Regional GER and NER trends since 2001/02 follow the same pattern as the poverty profile for Ghana wherein regions with the highest incidence of poverty have the lowest GER and NER, particularly when disaggregated by gender (Casely-Hayford, 2004). For instance, regions where there is the highest incidence of poverty, according to GLSS4, also experience the lowest NER and GER. (This was particularly so for the Northern, Upper West and Upper East regions).

Regional patterns for 2005/06 are breaking away from this poverty pattern. This may suggest that government and donor efforts at equalising educational access across the regions are to some extent working. Over the last two years the most influential measures have been the introduction of the capitation grant and the focus of donor financing on the 40 most deprived districts, 24 of which are located across the three Northern regions.

A remarkable characteristic of the latest patterns is that with the exception of Greater Accra Region, where the national capital is located – and where as a result there is a disproportionate concentration of national resources – both gross and net enrolments show significant improvements over the period. Worthy of note is the situation in the three northern regions (Northern, Upper East and Upper West), which usually lag behind in most social and economic indicators, both showed substantial

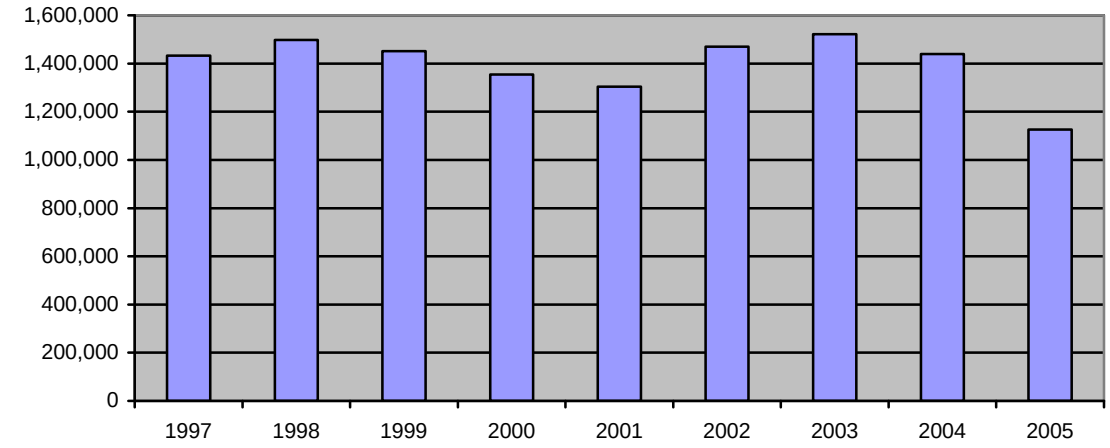
improvements in enrolment. In the Upper West, for example, GER increased from 63 to 100.4 between 2001 and 2005, while NER also rose from 45 to 70 over the same period.[2]

Net enrolment ratios follow similar trends, with the Northern, Upper East and Upper West experiencing the greatest increases over the five year period. Evaluative studies of the donor programmes in the regions suggest that two major interventions are helping to increase the enrolment rates at primary and JSS levels: food incentives and feeding programmes particularly aimed at attracting and retaining girls in the Northern regions. Another intervention which is demonstrating impact at the district and regional levels are non formal complementary education programmes run by civil society (Casely-Hayford, 2007).[3]

Out-of-school population

The low enrolment levels and ratios at the primary and JSS levels are an indication that large numbers of children who should be in school remain outside of the system, despite some recent improvements in the wake of the capitation grant.[4] Figure 10 shows that until the advent of the capitation grant, the out-of-school population for children aged 6-11 averaged about 1.4 million annually between 1997 and 2004, peaking at just over 1.5 million in 2003. In 2004, the figure dropped to 1.4 million and then further to 1.1 million in 2005, following the introduction of the capitation grant that year.

Figure 10: Out-of-school, 6-11 years olds (1997 to 2005)



Source: Authors, computed from EMIS data.

[2] According to the MOESS, the 2005/06 data set is "preliminary" and analysis by this team suggests that there are some inconsistencies since the data does not follow the normal pattern since 1985. More work is needed to determine whether there is a problem with the 2005/06 data from the MOESS.

[3] The World Food Program's evaluation of their *Girls' Education Program* found that the programme was significant in getting more children enrolled and retained in primary and JSS levels (WFP, 2004). The School for Life programme, a non-formal education complementary programme, has also helped over 130,000 out of school children integrate into the formal system after nine months of literacy training in local language (see Casely-Hayford, 2007).

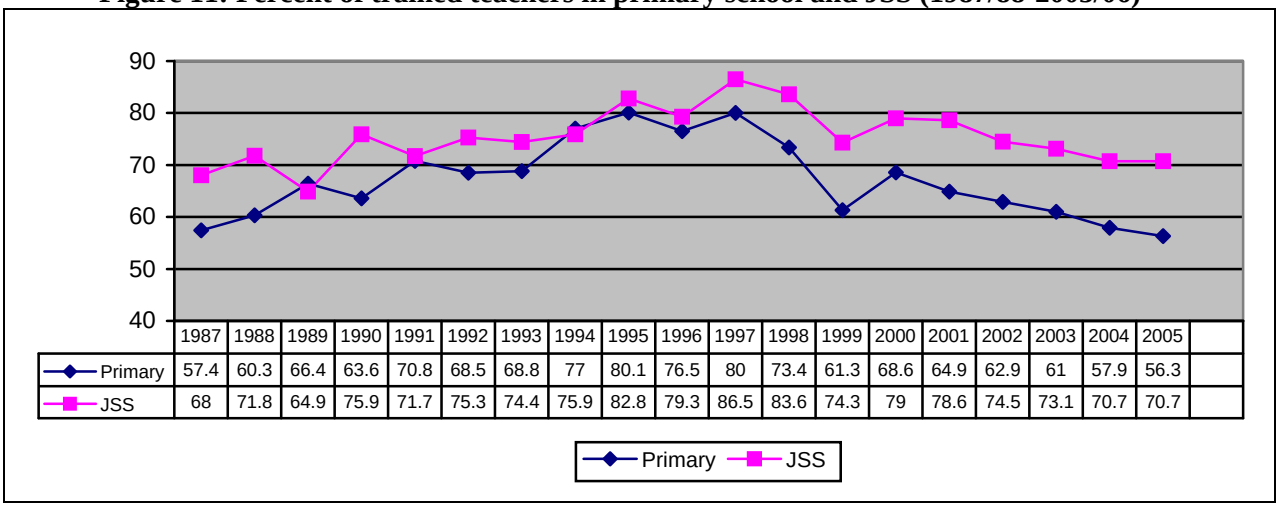
[4] The capitation grant is a subsidy of 30,000 cedis (about $US3.50) per child from the Ministry of Education paid to each school based on the number enrolled pupils. It is meant to offset fees for extra curricular activities, such as cultural and sporting activities, as well exam fees, which were previously paid by parents.

Trends in trained teachers

As stated earlier, a major impetus for the launching of the educational reforms in 1987 was the shortage of trained teachers as a result of years of out-ward migration. At the time of the reforms, an estimated 50.0 per cent of such teachers had left the teaching field. Against this background, teacher training formed a major part of the reforms.

However, 20 years after the initiation of the reforms, the proportion of trained teachers in primary schools, at 56.3 per cent, is lower than the 57.4 per cent at the time the reforms were launched. The situation is only marginally better for JSS, where the proportion of trained teachers in 2005/2006 was 70.7 per cent, compared to 68.0 per cent in 1987 (see Figure 11). During the first decade of the reforms, 1987 to 1997, the proportion of trained teachers did in fact follow an upward trend, rising from 57.4 per cent in 1987 to 80.0 per cent in 1997, for primary schools, and from 68.0 per cent to 86.0 per cent, for JSS. However, since then, both trends have been heading downwards.

Figure 11: Percent of trained teachers in primary school and JSS (1987/88-2005/06)



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Primary	57.4	60.3	66.4	63.6	70.8	68.5	68.8	77	80.1	76.5	80	73.4	61.3	68.6	64.9	62.9	61	57.9	56.3
JSS	68	71.8	64.9	75.9	71.7	75.3	74.4	75.9	82.8	79.3	86.5	83.6	74.3	79	78.6	74.5	73.1	70.7	70.7

Indeed, in 2004, the period with the most consistent data, the overall percentage of trained teachers fell significantly short of the targets in the ESP. In the primary sector, the actual was 73.5 per cent, compared to a target of 81.3 per cent. In the JSS, it was 83.5 per cent, instead of 89.2 per cent. The decline in the percentage of teachers was due in part to a combination of inadequate funding, attrition, and/or measurement problems. The share of GES expenditures devoted to teacher training, for example, was 5.3 per cent in 2004, down from 5.7 per cent in 1995, having fallen to a low of 4.8 per cent in 2003.[5] Anecdotal evidence also suggests that large numbers of teachers are leaving the country for South Africa, Gambia and England.

As would be expected, the decline in trained teachers has most affected rural and officially designated deprived areas, including regions. In 2004, for example, only 53.2 per cent of teachers in primary schools in the 40 deprived areas were trained, compared to the national average of 73.5 per cent. The percentages for the Northern Region and Upper East were similarly lower than the national average. A welcome exception, however, was the Upper West, where the percent did not only increase (from 77.1 per cent to 78.5 per cent) but at 78.5 per cent as considerably higher than the national average of 73.0 per cent. In the JSS sector, the corresponding figures were substantially lower than the national average of 83.5 per cent (although, again, Upper West proved to be the exception with its figure of 82 per cent closest to the national average).

[5] Trained teachers by definition are those who have attended training college and been qualified as such. Most private schools, however, employ university graduates without formal teacher training; these are not included in the calculation.

It must be noted, however, that the government continues with various programmes of training more teachers and intensifying deployment, particularly to deprived areas, to ensure equity. In 2005, 7,482 newly trained teachers were deployed to the various regions, according to need. In addition, 4,200 teachers returned from study leave. Over the same period, 3,000 teachers were granted study leave with pay, representing a net *inflow* of 1,200 teachers. The issue of granting teachers study leave with pay remains a highly contentious one, with significant numbers of teachers either taking courses unrelated to education and leaving the system after they complete the courses, or moving into administrative positions afterwards. A new decentralized system and pre-approval of courses beginning in 2005 was expected to help address this problem.

Efforts are also under way to train the 24,000 untrained teachers currently in the country's basic schools, most of them in deprived and under-served areas. Under a programme called the Untrained Teachers Diploma in Basic Education Programme (UTTDBE), "about 90.0 per cent of the untrained teachers in the country" are to be enrolled between 2004 and 2011.

In addition to the above, government has been raising the salaries of public sector teachers at all levels over the past decade. Indeed, between 1998 and 2006, salaries for teachers ranging from Certificate A to Assistant Director at least doubled in real terms (see Figure 12 below). The continued decline in the proportion of trained teachers – and the problems of retention that are believed to account for this state of affairs – despite these efforts suggests that other policy interventions may be required to address what appears to be a crisis in teacher supply in the country.

Figure 12: Trends in teacher salaries (constant US$)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Certificate A	905.2	917.4	954.8	######	1,610.8	1,542.5	1,500.1	1,716.5	1,857.1
Senior. Superintendent	1,402.6	######	1,595.3	######	2,396.3	2,339.7	2,297.7	2,629.1	2,844.5
Principal Superintendent	1,581.7	######	1,813.8	######	2,737.8	2,699.2	2,743.5	3,047.8	3,297.6
Assistant Director	1,873.5	######	2,344.6	######	3,127.9	3,114.0	3,087.9	3,533.2	3,822.8
					Percentage change				
Certificate A	-	1.3	4.1	46.7	15.0	-4.2	-2.7	14.4	8.2
Senior. Superintendent	-	7.2	6.1	30.0	15.6	-2.4	-1.8	14.4	8.2
Principal Superintendent	-	7.5	6.6	30.3	15.9	-1.4	1.6	11.1	8.2
Assistant Director	-	13.1	10.6	14.9	16.1	-0.4	-0.8	14.4	8.2
Average	-	7.3	6.9	30.4	15.7	-2.1	-0.9	13.6	8.2

Source: AFC based on GES data

Shortfall in teacher supply

A Government of Ghana reports indicate a very high vacancy rate within the teaching profession and a lack of teachers who are qualified to take up posts (Akyeampong. et al, 2000; Casely-Hayford, 2001). The Multi-site Teacher Education Research Project (MUSTER) revealed that there would continue to be a significant shortfall in the supply of teachers in the basic education system particularly over the next ten years.[6] The MUSTER project concluded that to achieve a "GER of 100 per cent in basic schools requires an increase of three to four times current levels of teachers" (Akyeampong et al., 2000)[7].

[6] MUSTER was a joint project of the University of Cape Coast and University of Sussex, UK. The project involved investigation into several aspects of teacher training, costs and financing of teacher education and teacher identity.

[7] These projections are still being contested by some senior policy makers since the PTR was not factored into the projections.

Educational achievement and equity

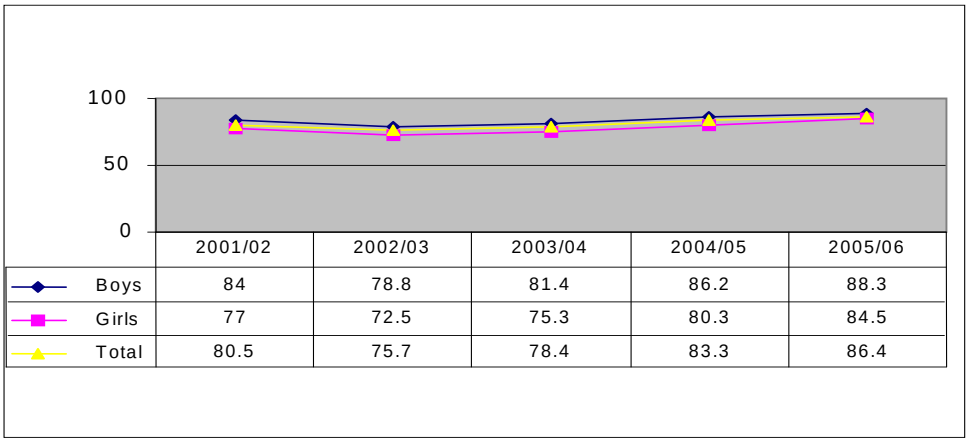
The ESP clearly defines the equity targets to be met in order to ensure that there is equitable access; some measures include:

- Gender parity across all levels of education
- Regional and equity
- Special Needs education for children with disabilities

A set of deprivation criteria developed by the MOESS for allocating resources to the districts appears to have assisted in integrating the notion of equity in several donor assisted programmes supported by the Ministry of Education's and GES programmes. The Ministry of Education has set up a criteria which is used to allocate and target resources to districts which are considered extremely deprived based on the PTR, participation rates and resource allocations per school. The deprivation ranking has also influenced policy decisions on the allocation of public spending to education particularly with the recent emergence of the "capitation grant scheme" whereby districts and schools receive a small allocation per pupil (30,000 cedis) enrolled at basic education level. Studies of the capitation grant suggest that the capitation grant has helped schools defray costs such as cultural, sports, and examination fees which prevent many children from poor households from attending school. Another way in which equity is integrated into some education policy programmes is the increased awareness of MOESS regarding the regions and districts of greatest need; the most recent Education Sector Annual reviews attest to this growing awareness of the inequities across the country concerning educational quality and achievement rates.

National primary gross enrolment rates between 2001 and 2005 indicate no significant differences between boys and girls at the primary level; however, the gender gap is widened as we move from the lower basic levels to higher tertiary levels of education. There were slight improvements in the 2005 GER data, (perhaps because the capitation grant scheme was introduced in that year). Girls' GER rose from 77 per cent in 2001/02 to 84.5 per cent in 2005/06 while boys GER rose from 84 per cent to 88.3 per cent during the same years.

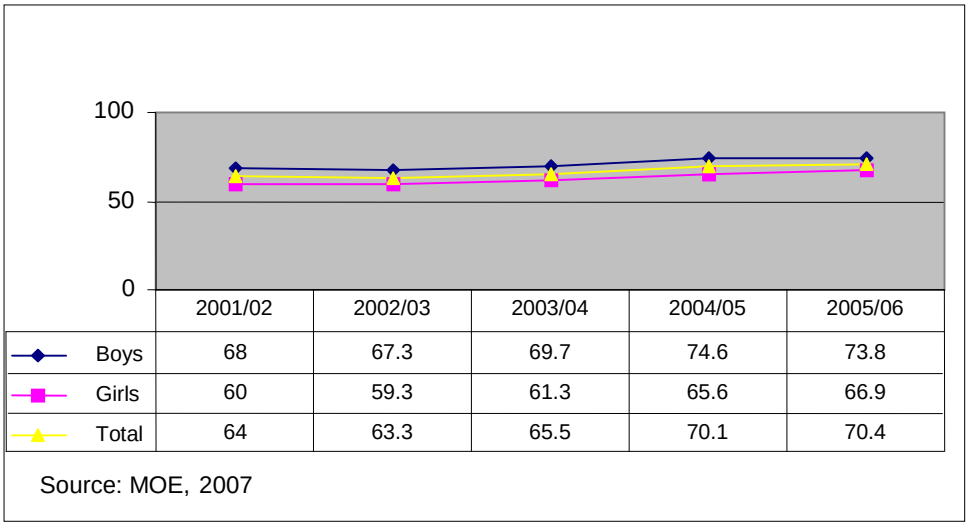
Figure 13: National Primary School Gross Enrolment by Gender



	2001/02	2002/03	2003/04	2004/05	2005/06
Boys	84	78.8	81.4	86.2	88.3
Girls	77	72.5	75.3	80.3	84.5
Total	80.5	75.7	78.4	83.3	86.4

The gross enrolment rate for girls and boys at the JSS level did not increase to the same extent as at the primary level with GER for girls moving from 60 per cent to 66.9 per cent and GER for boys moving from 68 per cent to 73.8 per cent over the five year period (see Figure 14).

Figure 14: National JSS Gross Enrolment by Gender



	2001/02	2002/03	2003/04	2004/05	2005/06
Boys	68	67.3	69.7	74.6	73.8
Girls	60	59.3	61.3	65.6	66.9
Total	64	63.3	65.5	70.1	70.4

Source: MOE, 2007

Girls' education gender parity targets

Ghana has made significant strides at the primary and junior secondary level to ensure that the gender gap is closed and the Millennium Development Goal of gender parity is achieved. The gap between female and male primary GERs has narrowed over the last six years (between 1999/00 to 2005/06) moving the Gender Parity Index from 0.9 to 0.95[8]. The gender gap worsens at succeeding levels of education. Female enrolment rates as a proportion of total enrolments in 2005/06 were 68.7 per cent at JSS level, 43.4 per cent at senior secondary and 33 per cent at tertiary level.

Table 14: Gender parity in primary schools (1999 to 2005)

Gender Parity	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Primary GER	75.7%	78.6%	83.8%	85.7%	86.5%	87.5%	92.1%
Male Primary GER	79.8%	82.2%	87.5%	89.1%	89.5%	90.5%	95.3%
Female Primary GER	71.6%	74.8%	80.1%	82.2%	83.10%	84.40%	88.8%
GPI	0.90	0.91	0.92	0.92	0.93	0.93	0.95

(EMIS Data Cited in ODI/CDD Ghana 2007)

Two of the most effective programmes for closing the gender gap have been financed by Donor agencies. These include, the World Food Programs' Girls' Education Incentive Program, which provides food packages to girls and their families that reach 80 per cent attendance rates at the upper primary and JSS levels across the three regions of northern Ghana. Recent evaluative studies suggest that food incentive packages have been very successful in increasing the GER and NER rates across the districts which were targeted for intervention attracting a large number of girls to enrol and remain in primary and JSS schools (WFP, 2004). Several other donor and NGO financed programmes which are contributing to positive access and retention results in Northern Ghana include the Catholic Relief Service (CRS) school

[8] Gender Parity Index is the Gross Enrolment Rate (GER) of girls over the Gross Enrolment Rate for boys. When the GPI is equal to one (1.0) then parity has been achieved. When it is less than one parity has not been attained and there are less girls than boys in school. If the GPI is over (1.0) then there are more girls in schools than boys.

feeding programme and the Government's Girls' Scholarship scheme both of which improve retention particularly at the upper primary and JSS levels.

However, data on budgetary allocations to the Girls' Education Unit (GEU), MOESS suggest that there is not any significant increase in the budget allocation to the Unit in order to ensure that girls' education has been better financed over the last ten years. Lack of coordination among the agencies working on Girls' Education in Ghana suggests the need for the Ministry and the GEU in particular, to take a stronger role in guiding girls' educational programming across the country. Research has also suggested that most of the programmes, which have attempted to close the GPI gap, have been externally funded and work directly at district or regional levels. An area for future research will be in tracking the impact of donor assistance to girls' education incentive packages on educational attainment since the World Food programme and CRS, two major supporters of school feeding programmes will gradually phase out their programming in northern Ghana over the next two years.

Targeting and equitable financing

Over the last five years, the Government has attempted to use deprivation criteria to target the poor and channel resources to the deprived districts for educational investment (e.g. GETFund, SESP, PRSP). DFID support to Ghana between 2000 and 2004 ensured that district education offices were compelled to target the disadvantaged; measures such as training and district level guidelines were used to ensure that education services were provided to the poor in rural areas.

The MOEYS uses the following deprivation criteria to rank all 138 districts and select the top 40 most deprived districts for increased investment and budgetary support. The criteria involve weighting enrolment at 30 per cent, number of schools at 10 per cent and disadvantaged criteria at 60 per cent. The disadvantaged criteria also included input criteria such as: seating places per pupil, core textbooks per pupil, percentage of qualified primary teachers, per student budget at primary level and PTR at primary level. The access criteria include: taking into consideration GER and the percentage of girls enrolled in school. The achievement criteria include the BECE English pass rate and the BECE maths pass rate. The GER and the PTR rank are given a double weight in calculating average ranks across all the criteria. The GER and the PTR rank are given a double weight in calculating average ranks across all the criteria.The ranking is then used to allocate education resources on a district basis when annual budgets are reviewed. The MOEYS is in the process of assisting the GETFUND develop a similar formula, which will enhance equitable resource distribution and target the neediest areas. There is anecdotal evidence to suggest that the MOEYS deprivation criteria are having some impact on ensuring that resource allocations are more equitably disbursed particularly when it comes to donor financing.

Another area, which needs further investigation, is the degree to which equity can be monitored and tracked within the current education budget and disbursement system. The Medium Term Expenditure Framework (MTEF) does not allow easy tracking of expenditures particularly when considering the ESP planning framework and outcomes such as increased gender equity, and targeted support for deprived areas. Recommendations from studies to the donor and government communities have revealed that more work is needed to ascertain the degree to which budget inputs are tied to actual expected outcomes within the education sector in order to ensure MOEYS financial resources are distributed and targeted to the poor (Casely-Hayford, 2004).

Household expenditure on education

Notwithstanding the policy of providing free public primary schooling, as noted earlier, households contribute substantially to education financing in Ghana. Table 8 provides estimates of household expenditures on education from primary school to senior secondary school. With the exception of senior secondary schools, almost all of which are publicly owned, the data applies mostly – though not exclusively – to private schools. For example, with the introduction of the capitation grant, certain levies,

such as cultural activities fees, in public schools have been abolished, although private schools continue to charge such levies[9].

Research in Ghana over the last two rounds of the Ghana Living Standards Survey suggest that households pay a significant portion of their daily and yearly income on education. Next to food, education is the single highest proportion of income expenditure (GSS, 2000). Data across different localities and ecological zones in Ghana suggests that the people living in the Capital, Accra, are paying the highest amount for Basic Education (2,525,144 cedis) compared to the more Rural Savannah dwellers (668,135 cedis). These figures reflect differences in the cost of living in these areas as well as the disproportionate numbers of people who are also paying for private education in the urban centres.

Despite the absence of fees in public schools, research based on the GLSS 4 reveals that one of the main reasons for non attendance in primary and JSS is the high direct and indirect costs of schooling (GSS, 2000)[10]. For instance, the major expenses for parents in sending their children to school are feeding and lodging costs, transportation to and from school and other associated expenses. In areas, such as the rural savannah, rural coastal and rural forest areas where there remains a very high dependence on children for labour purposes at home and on the farm, only a small proportion of children will remain in school throughout their lives. (see next section for educational attainment data and completion rates).

[9] They do not receive any capitation grant funding.

[10] Households in Ghana are paying approximately $160 US per year for basic education which is a sizable proportion of yearly income.

Table 15: Estimated Household Expenses on Education (2006 cedis)

	Accra	Other Urban	Rural Coastal	Rural Forest	Rural Savannah	National: Amount	Percent Share
Average amount paid per person for primary school							
School & Registration Fees	531,543	187,317	51,988	91,293	11,784	136,400	28.6
Contributions to PTA	17,640	7,681	2,766	6,970	5,071	7,107	1.5
Uniforms & sports clothes	96,439	56,782	34,757	41,274	40,024	48,768	10.2
Books and & school supplies	118,650	44,869	18,867	23,837	14,191	35,269	7.4
Transportation to/from school	70,960	28,561	12,499	10,780	320	19,430	4.1
Food, board & lodging at school	475,676	229,244	159,143	165,301	56,981	192,166	40.3
Other expenses (clubs, extra classes, etc.)	107,890	44,029	18,691	14,460	4,603	29,553	6.2
Other in-kind expenses	23,665	11,604	1,743	3,696	9,467	7,994	1.7
TOTAL	1,442,464	610,087	300,455	357,611	142,441	476,688	100.0
Average amount paid per person for junior secondary school							
	Accra	Other Urban	Rural Coastal	Rural Forest	Rural Savannah	National: Amount	Percent Share
School & Registration Fees	1,151,277	938,384	326,953	963,334	173,510	841,601	50.9
Contributions to PTA	31,229	25,587	13,769	18,465	17,359	22,681	1.4
Uniforms & sports clothes	97,361	90,437	47,030	67,350	75,489	79,556	4.8
Books and & school supplies	239,848	130,934	82,045	82,568	87,757	129,164	7.8
Transportation to/from school	203,747	72,371	52,253	36,418	45,670	83,037	5.0
Food, board & lodging at school	633,662	383,887	294,086	269,261	179,925	370,341	22.4
Other expenses (clubs, extra classes, etc.)	108,160	113,809	58,454	55,504	21,473	82,174	5.0
Other in-kind expenses	59,860	62,486	14,007	9,502	66,952	43,837	2.7
TOTAL	2,525,144	1,817,895	888,596	1,502,402	668,135	1,652,391	100.0
Average amount paid per person for senior secondary school							
	Accra	Other Urban	Rural Coastal	Rural Forest	Rural Savannah	National: Amount	Percent Share
School & Registration Fees	1,527,255	1,521,766	441,032	859,539	329,008	1,272,646	51.2
Contributions to PTA	18,957	19,242	6,251	45,920	23,993	22,466	0.9
Uniforms & sports clothes	80,123	84,881	104,972	85,925	58,153	81,932	3.3
Books and & school supplies	539,787	173,224	296,696	189,919	107,484	260,567	10.5
Transportation to/from school	387,360	62,752	151,310	60,368	138,307	150,978	6.1
Food, board & lodging at school	811,646	396,260	1,232,052	532,887	218,617	527,632	21.2
Other expenses (clubs, extra classes, etc.)	51,120	109,473	128,969	213,565	89,566	107,339	4.3
Other in-kind expenses	84,182	58,669	12,452	38,817	56,770	60,142	2.4
TOTAL	3,500,430	2,426,267	2,373,733	2,026,940	1,021,898	2,483,701	100.0

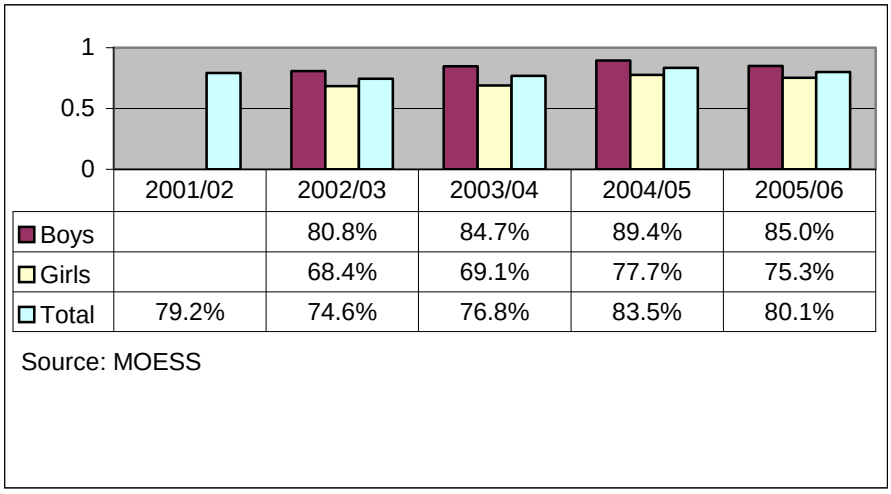
Source: Authors, based on GLSS4 data

Completion rates

One of the key educational indicators of efficiency within the education system is the rate of completion among children entering the primary and junior secondary school system. Data on completion has proven to be extremely problematic to obtain due to the imprecise data on population figures for the relevant age cohorts. Two other sets of data are therefore required to consider the current completion trends in Ghana: EMIS data and CWIQ data.

Data from the Ministry of Education reveal that completion rates at primary level[1] have slightly improved over the last five years moving from 79.2 per cent to 80.1 per cent. The completion rates have varied considerably across the regions and between boys and girls (see Figure 15). Completion rates at the junior secondary level are much lower compared to the primary school level, ranging from 66.5 per cent for boys to 52.8 per cent for girls (2005/06) (see Figure 16).

Figure 15: National primary completion rates by gender

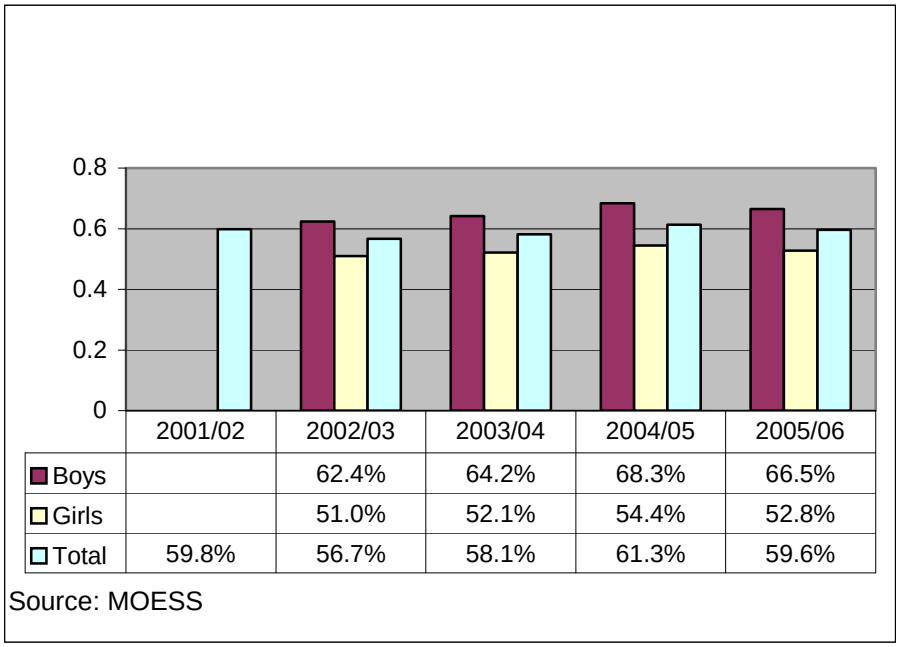


	2001/02	2002/03	2003/04	2004/05	2005/06
Boys		80.8%	84.7%	89.4%	85.0%
Girls		68.4%	69.1%	77.7%	75.3%
Total	79.2%	74.6%	76.8%	83.5%	80.1%

Source: MOESS

[1] The primary completion rate refers to the proportion of a particular cohort of primary 1 enrolees, who complete the last grade of primary schooling 6 or more years later.

Figure 16: National JSS Completion Rates by Gender



	2001/02	2002/03	2003/04	2004/05	2005/06
Boys		62.4%	64.2%	68.3%	66.5%
Girls		51.0%	52.1%	54.4%	52.8%
Total	59.8%	56.7%	58.1%	61.3%	59.6%

Source: MOESS

Data from the Ghana Statistical Service (GSS 2003) based on the CWIQ survey reveals that one out of every four children who enter the formal education system are able to complete JSS. Oduro (2007) finds that "the highest incidence of drop out occurs at the primary school level. This is confirmed for the sub-sample of the population aged 15 years and over that have attended school in the past but are no longer in school. About 43 per cent of the population aged 15 years and over attended school in the past and did not complete primary school".

Transition rates

The Education Sector Performance Report for 2006 states that "in the 2005/06 BECE, out of the 279,161 candidates who sat for the Basic Education Certificate Examination 177,070 qualified (63 per cent) for Senior Secondary School. Approximately 151,000 qualified candidates were placed in schools (85 per cent) leaving approximately 102,091 candidates who did not qualify to enter any of the institutions (37 per cent)" (See Table 16 below). The Government's report lamented on their inability to track the 37 per cent of JSS candidates who did not enter the SSS since "the main challenge in the implementation of the new education reform will be students who are not able to progress to the next level of education but enter into the labour market. The question is the drop out between JSS3 and SSS1 and the teeming unemployed graduates in the system… if they are not to be relegated to the category of failures. They are to be properly nurtured to contribute to the productivity of the country. (MOESS, 2006 p.47)"

Table 16: Transition rates (2002-2003)

	JSS3-SS1					
	JSS3	JSS3	%		Admission rate	Transition rate
YEAR	Total Candidates Presented	Total Qualified	% of Candidates presented	SSS1 (next year)		SS1

2000/01	233786	141532	60.539126	77704		0.3323723
2001/02	247699	149611	60.400325	102891	0.7269805	0.4153872
2002/03	264977	160261	60.481098	125245	0.8371376	0.4726637

P6 T0 JSS1					
Transition	2004-05	2005/06			
	Actual	Target			
P6-JSS 3	92.9%	88.4%			

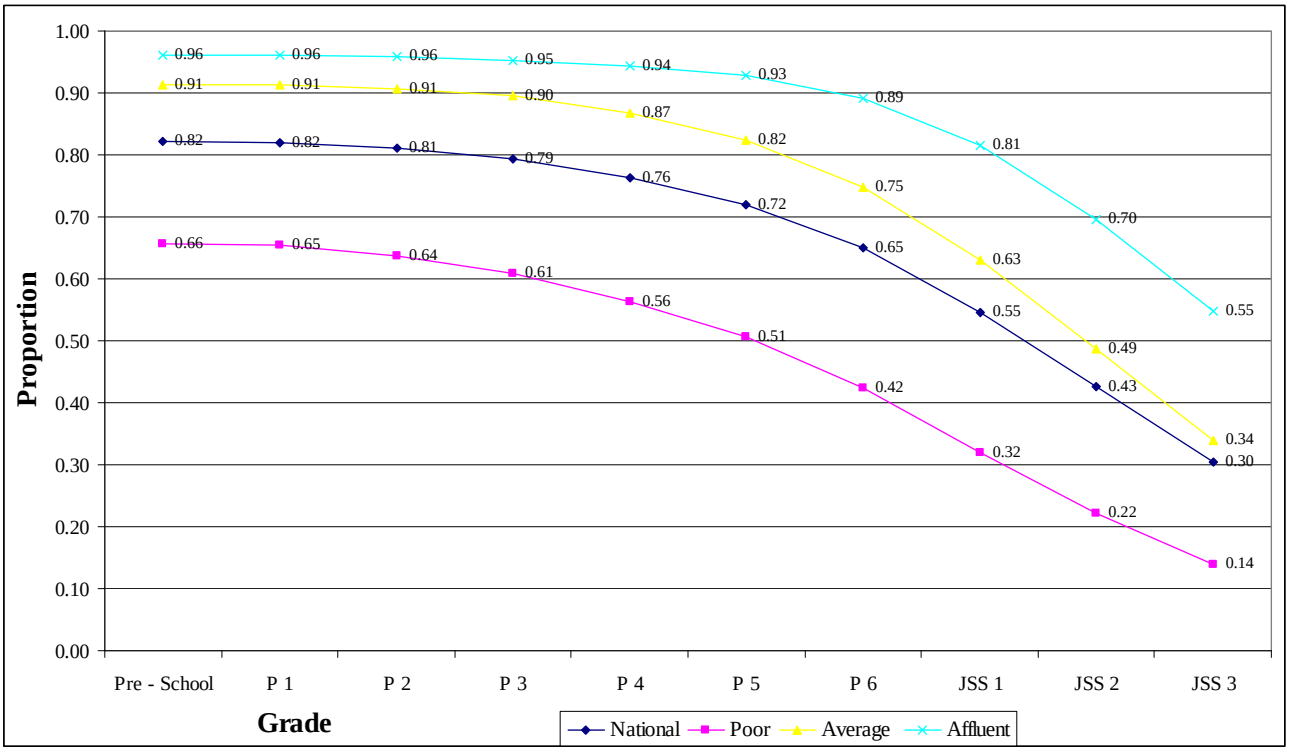
(Source: MOESS/ESR, 2006)

National data on transition suggests that about 92.9 per cent of children are transitioning from P6 to JSS 1; national transition rates at the JSS level suggest that only 47 per cent of children who are sitting the BECE are able to attain entry at the SSS level. See chapter 5 for further explanation related to the poor transition rates between the JSS and SSS.

Educational attainment and wealth

The effects of household wealth on educational attainment have been investigated in the population cohort aged 15 to 19 years of age using the CWIQ data of 2003. Findings suggest that children attain different levels of education across different wealth groupings particularly when looking at the basic education sector. For instance, out of the 65 per cent of children who completed primary 1 from the poor wealth grouping only 14 per cent completed JSS 3. Out of the 96 per cent of children from the affluent wealth grouping who completed P1, a much higher proportion completed JSS3 (55 per cent). The educational attainment profile across various regions reveals that children in the higher wealth quintiles are more likely to complete primary and JSS schooling compared to their lower wealth quintile counterparts.

Figure 17. Relationship between educational attainment and wealth



(Source: Wumbee, 2007)

Households were categorised into wealth groups by using household assets and amenities data as a proxy in order to construct a wealth index. The bottom 40 per cent represented the wealth index of the poor; the next 40 per cent represented the average wealth group and the top 20 per cent represented the affluent household wealth group. The national represents the educational outcomes for the total average population when it is not disaggregated into the wealth groupings (Wumbee, 2007).

Education quality

One of the greatest challenges for the Ghana Government over the last 15 -20 years in formulating education policy and programmes is to balance the strategies for increasing access with commensurate policy reform in ensuring quality. Unfortunately data over the last 6 years suggests that this has not been achieved despite large inflows of donor financing for non salary portions of the education budget explained earlier in the paper. Many donor financed programmes have aimed at improving quality while increasing access for children. Lack of focus on increasing the numbers of trained teachers and provision for books particularly across the three northern regions and other deprived areas of the country appear to be two of the main factors. The following section reviews some of these factors:

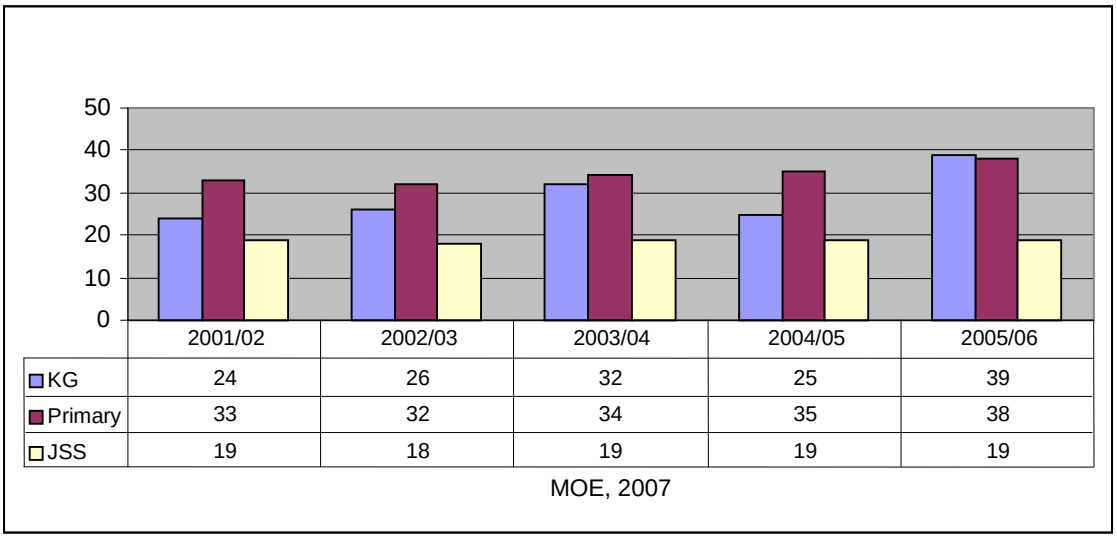
> " The disparity index which measures differences in the quality of service provision (as measured by the seating places per pupils, writing space per pupils, access to drinkable water and text book ratio) also fell from 0.2 in 2001/02 to 0.13 in 2005/06. Despite an increase in the Primary Pupil: Teacher Ratio (PTR) at the national level, PTRs fell significantly in the Upper East and Upper West and for the 40 most deprived districts as a whole" (ODI/CDD, 2007, p 101.).

A fall in the disparity index from .2 to .13 over the four year period indicates a significant decline in the quality of services being provided to children within the education sector and helps to explain the poor educational achievement levels.

Pupil-teacher ratios

Figure 18resents data on national pupil teacher ratios in public sector schools between 2001/02 to 2005/06. The figure indicates that PTRs have consistently increased at the primary level particularly over the last year 2005/06 mainly due to the higher rates of enrolment.

Figure 18: National pupil-teacher ratios by school level



	2001/02	2002/03	2003/04	2004/05	2005/06
KG	24	26	32	25	39
Primary	33	32	34	35	38
JSS	19	18	19	19	19

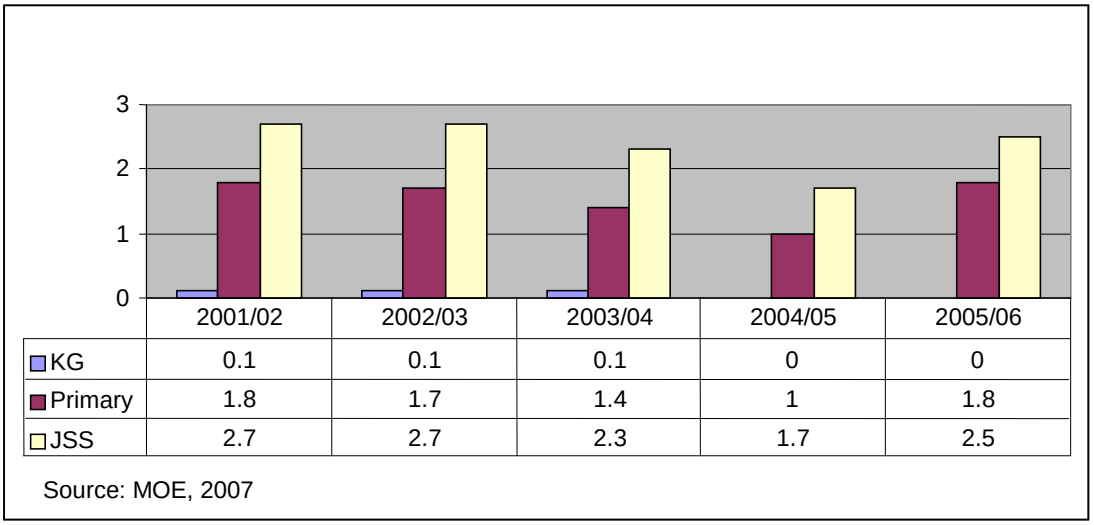
MOE, 2007

Reports by Government suggest that the PTR has risen to unmanageable levels in the Upper East region where classrooms are over-filled to unmanageable levels (MOESS/ESR, 2006). The Pupil Teacher Ratio at the JSS level is still far below the GES standard of 35 pupils per teacher and increases the level of wastage in the system.

Core textbook ratios

Adequate access to textbooks (i.e., one relevant textbook per student) is also an important indicator of the quality of education. Under GES policy, each student in basic schools should have access "on an individual basis" to three government-designated core textbooks, namely, English, mathematics, and science. A textbook ratio of 1:1 means complete individual access to these books. A core text book ratio of more than 1.1 indicates that children have access to more than one book in the classroom.

Figure 19: National core textbook ratio (2001/02 and 2005/06)



	2001/02	2002/03	2003/04	2004/05	2005/06
KG	0.1	0.1	0.1	0	0
Primary	1.8	1.7	1.4	1	1.8
JSS	2.7	2.7	2.3	1.7	2.5

Source: MOE, 2007

On average, a Ghanaian child has fewer than 2 text books at the primary school level and an average of 2.5 text books at the JSS level. Several studies conducted in northern Ghana suggest that the core textbook ratio is far worse in the deprived areas (NNED, 2006). Data on textbook access, however, is fragmentary and sometimes contradictory. The Education Sector Performance Report of 2005 provides the only consistent data available on the topic. There are significant disparities between the ratios at the national level and those for the three northern regions, which often lag the rest of the country in key socio-economic indicators (see Tables 17 and 18).

Table 17: Core textbook ratio for primary schools (2002-2004)

	2002/2003 Actual	2003/2004 Actual	2004/2005 Actual	2004/2005 Target	2005/2006 Target
National	1:0.6	1:0.5	1:0.3	1:1	1:1
Northern Region	1:05	1:0.4	1:0.2	1:1	1:1
Upper East	1:04	1:0.3	1:0.2	1:1	1:1
Upper West	1:0.5	1:0.4	1:0.3	1:1	1:1

Source: Ghana Education Service

Table 18: Core textbook ratio for JSS (2002-2004)

	2002/2003 Actual	2003/2004 Actual	2004/2005 Actual	2004/2005 Target	2005/2006 Target
National	1:0.9	1:0.8	1:0.6	1:1	1:1
Northern Region	1:08	1:0.6	1:0.5	1:1	1:1
Upper East	1:07	1:0.6	1:0.4	1:1	1:1
Upper West	1:0.8	1:0.6	1:0.4	1:1	1:1

Source: Ghana Education Service

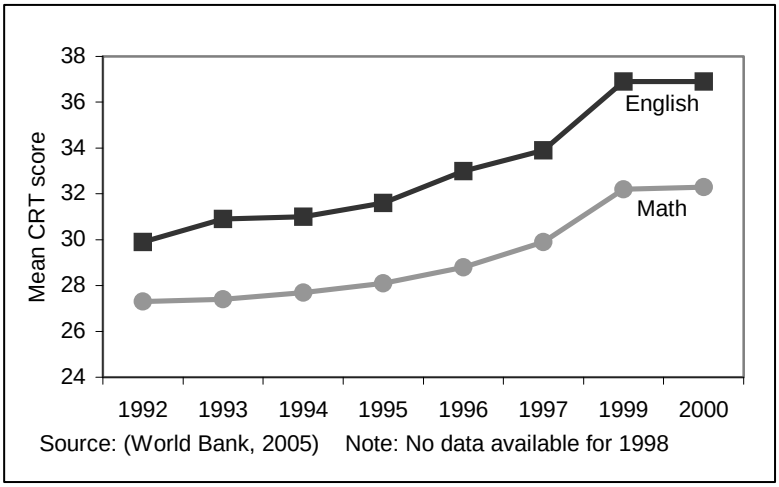
The data reveal that the most recent target ratio of 1:1 book ratio for primary schools and JSS was not only missed but the overall ratio has declined since 2002. According to GES this situation came about as a result of delays in budgeted disbursements for textbook procurement.

Trends in pupil achievement

Literacy Levels

Studies over the last 15 years suggest that the vast majority of Ghanaian children are failing to learn to read and write after six years of primary schooling. Studies suggest that between 6 and 10 per cent of children after six years of primary schooling are achieving mastery in reading depending on where they live, what type of institution they attend (i.e. public or private) and whether the child is from an urban or rural setting (Casely-Hayford, 2006)[1]. The only consistent data generated over a longitudinal period is based on Criteria Reference Testing conducted by the Ministry of Education between 1992-2000 and reveals that between 1992 and 2000 mean scores improved over the period from 30 per cent to 36 per cent in 2000.

Figure 20: Criterion Reference Test Scores (1992 to 2000)



Data from the World Bank's assessment of Ghanaian Literacy trends suggest that while there has been some modest improvement in CRT scores over the years, the results overwhelmingly have alerted development partners and the Ghana Government that the levels of reading among children are extremely low. "Whilst the CRT confirms the improvement which has taken place it also confirms that standards are still very low: the most recent CRT shows that in 2000 less than 10 percent of children reached mastery level in math, and less than 5 percent did so in English" (World Bank, 2004:).

More recent data from the National Education Assessment (NEA) continues to reveal the same low achievement trends in English among primary school children. The NEA reveals that 49 per cent of pupils reached the minimum competency level (35 per cent) at P3 and 64.1 per cent of pupils reached a minimum competency at P6. "The percentages of pupils reaching the proficiency level of 55 per cent are comparatively low with only 16.3 per cent and 23.6 per cent for P3 and P6 respectively (Adu, 2006)[2].

Performance data within the Ministry of Education have always been difficult to corroborate over an extended period of time. The most recent data based on Basic Education Certificate Examination (BECE) results suggests very little variation in performance between 2002 and 2006.[3] Table 19 below

[1] It must be noted that English is the second language for most Ghanaian children and that the medium of instruction from P1 to P3 is often in the local language, depending on the school.

[2] The minimum-competency level refers to pupils who score 35 per cent of the total score on the test and proficiency level applies to pupils who obtain 55 per cent of the total score.

[3] The BECE tests are set to ensure that only about 60 per cent of BECE candidates are able to pass within the basic education exam certificate.

indicates that between 2002/2003 and 2005/2006 the percent of pupils gaining aggregate 6-30 ranged between 61.6 per cent and 62.0 per cent of the total. The BECE is the examination taken at the end of the basic education cycle, which determines whether or not a pupil is able to progress on to second cycle education. It is the main outcome indicator used to assess the quality of basic education available on a longitudinal basis. Performance in the BECE declined in 2005, especially across the 40 deprived districts. These districts were also among those which experienced a large increase in enrolment due to the capitation grant.

Table 19: BECE Examination Entrants Gaining Aggregate 6-30

BECE examination entrants gaining aggregate 6,30	2002-2003	2003-2004	2005-06
% Gaining Aggregate 6-30 National	61.6%	61.3%	62%
% Gaining Aggregate 6-30 in Northern Region	n/a	51.1%	47%
% Gaining Aggregate 6-30 in Upper East Region	n/a	50.6%	55%
% Gaining Aggregate 6-30 in Upper West Region	n/a	60.8%	55%
% Gaining Aggregate 6-30 in 40 deprived districts	n/a	51.1%	49%
% Gaining Aggregate 6-30 in other districts	n/a	63.5%	62.2%

Summary

Several assessments of the education reforms have been conducted in Ghana by the Ghana Government, the World Bank and other donors. These assessments reveal that the educational reform process has achieved some objectives in relation to enrolment and overall expansion of public education system but has failed to make significant impact in the area of improving quality and learning outcomes for children in Ghana. However, enrolment trends have been mixed; primary gross enrolment growth over the reform period has been erratic but increased at the later part of the reforms. JSS gross enrolment increased. To ensure gender and social equity, the government has set equity targets and developed deprivation criteria for the allocation of resources to the district. Also the gender parity index is helping to monitor the gender gap in educational sector.

The reforms have not been successful in helping the vast majority of rural children escape intergenerational poverty. There are also marked discrepancies between gross enrolment and net enrolments as well as regional disparities with the three northern regions lagging behind. The assessment also reveals the large numbers of out of school children and dismal transition from basic school to secondary and tertiary level particularly in areas where endemic poverty persists. Other quality indicators such as pupil- teacher ratio, pupil-text book ratio and literacy levels have shown some modest improvement in later part of the reform period. The proportion of trained teachers increased at the beginning of the reforms but fell afterward. The proportion of trained teachers is 1.1 per cent less than the proportion at time of the reforms. There is high vacancy in the teaching profession.

Despite the free education policy by government, households in Ghana contribute significantly to education financing and this affects the educational attainment level of children of different socio economic backgrounds. An analysis of educational attainment and wealth reveals that children from poor households in rural northern Ghana have far less chance of completing JSS3 than their more affluent counterparts.

Chapter 5: Developments in post-basic education

State of secondary education

Despite the treatment of "basic education" as the priority area throughout Ghana's history of education policy reform, considerable attention has also been paid to post-basic education, namely secondary and tertiary schooling. The report of the President's Committee for Education Reforms (2002) highlighted the fact that only 40.0 per cent of JSS graduates proceed to Senior Secondary School (SSS), with only 10.0 per cent of SSS students proceeding to tertiary institutions. Paradoxically, the report also listed 75 "under-enrolled" secondary schools, each of which had 100 students or fewer. These secondary schools were often located in remote areas and referred to as "day schools" since the more traditional SSS were boarding schools, heavily subsidized by central government and were located in the urban centres, attracting the majority of Ghana's urban elite (Addae-Mensah, 2000).

Besides the inability of some of the 60.0 per cent of JSS students to meet the minimum academic requirements for entering secondary schools, the report gives some of the following major reasons for under-enrolment:

> *Inadequate facilities, such as libraries, hostels, accommodation for staff, laboratories and classrooms, as well as poverty, which makes it "difficult for some parents to afford the barest minimum of fees. (Government of Ghana, 2002a*)" [4]

To help address these problems, the government launched a "model school" programme to provide at least one "well-endowed school" across each of the country's 138 districts. The programme is still being implemented and there is as yet no evaluation to link its impact, to trends and patterns in secondary school education in the country.

There are other reasons why policy makers and researchers are getting increasingly interested in post-basic education. A World Bank report in 1998 found a "high rate of return to SSS" education, compared to the "relatively low rates of return on JSS education".[5] Palmer (2006:6) cited research that confirmed this view, noting that "returns to education are lowest at primary level and that it is at the post-basic level that returns are now highest…middle school education (or JSS) has only a marginal impact."

With specific reference to Ghana's rural areas, where poverty is highest and educational opportunities are lowest, he wrote, quoting Canagarajah and Portner (233):

> *…while increased education appears to have a positive effect on welfare, it thus seems that a primary education is not itself sufficient*[6]*… The benefit gained from having some [JSS] education is not large…. The strong positive effect of post-JSS education, in contrast, suggest clearly that this is useful in the fight against poverty*

Secondary school education is universally considered to be an unavoidable path to providing teachers for basic schools and training the highly skilled manpower.[7] A brief review of the state of secondary education in Ghana is therefore in order. The limited data available offers some on trends and patterns in secondary education recent years.

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[4] Report of Presidential Commission on Education, p.63.

[5] Palmer, R, "Education, Training and Labour Market Outcomes in Ghana: Review of the Evidence," Centre for African Studies, University of Edinburgh, February 2006.

[6] The authors re-iterate that this result depends in part on how education is measured.

[7] On 5 April 2007, Ghana hosted the World Bank-sponsored Regional Conference on Secondary Education and Training in Africa (SEIA) as part of global efforts to emphasize post-basic education, after decades of near exclusive attention to basic education.

Table 20: Enrolment Trends in SSS (2001-2005)

Regions	2001	2002	2003	2004	2005
Ashanti	41,003	32,235	47,932	72,814	79,366
Brong Ahafo	17,384	21,234	22,398	28,951	31,721
Central	28,533	31,040	33,519	41,164	44,074
Eastern	34,002	39,676	38,248	54,345	58,604
Greater Accra	29,167	32,235	37,037	39,255	39,730
Northern	13,679	17,537	17,958	22,401	24,657
Upper East	9,297	9,128	8,206	10,019	11,270
Upper West	5,855	5,985	4,706	7,030	8,011
Volta	21,627	26,497	27,012	35,511	35,362
Western	16,085	18,929	21,438	27,076	28,735
TOTAL	**216,632**	**234,496**	**258,454**	**338,566**	**361,530**
% Change		8.25	10.22	31.00	6.78

The SSS system has expanded rapidly in recent years with a national average annual rate of 14 per cent. Separate data from GES for 2005 alone provides some useful insights. Although private schools accounted for 17.1 per cent of the 585 senior secondary schools in existence in 2005, they had only 7.2 per cent of the total enrolment.

The GER of 25.5 per cent at the SSS level (28.6 per cent for boys and 22.4 per cent for girls) is nearly identical to the Sub-Saharan Africa average of 25.0 per cent. The percentage of trained teachers at the SSS level was 77.6 per cent, somewhat higher than the 70.7 per cent that existed at the JSS level, but still considerably lower than optimal. The pupil-teacher ratio, was 22:1 and lower than 25:1, which is the standard. The low pupil teacher ratio's reflect the low rates of enrolment as well as the sizeable number of under-enrolled schools in the system. In terms of gender equity, the percentage of girls in secondary schools was 43.1 per cent, with private schools having a much higher percentage (55.0 per cent) than public ones (42.1 per cent).

State of tertiary education

Reforms in the tertiary sector are as old as those in the pre-tertiary sector, although they have not commanded the same attention as the latter – perhaps because of the international focus on basic education, and the resulting effect of donor preferences within the policy discourse on education in Ghana. Between 1986 and 1988, about the same time that the JSS reforms were launched, a University Rationalization Committee proposed a series of reforms to deal with "a prolonged period of under-funding and decline" in the tertiary sector (Girdwood, 1999). The White Paper that emanated from those proposals in 1991 was titled *Reforms to the Tertiary Education System*. The Paper subsequently served as the basis of the Tertiary Education Project (1993-1998), which sought to achieve the following:

- Reverse system deterioration, falling standards, and the declining quality of education;
- Expand access to tertiary education;
- Establish a stable and sustainable basis for the financing of tertiary education; and
- Create institutional capacities for quality monitoring and policy evaluation in the tertiary education sector.

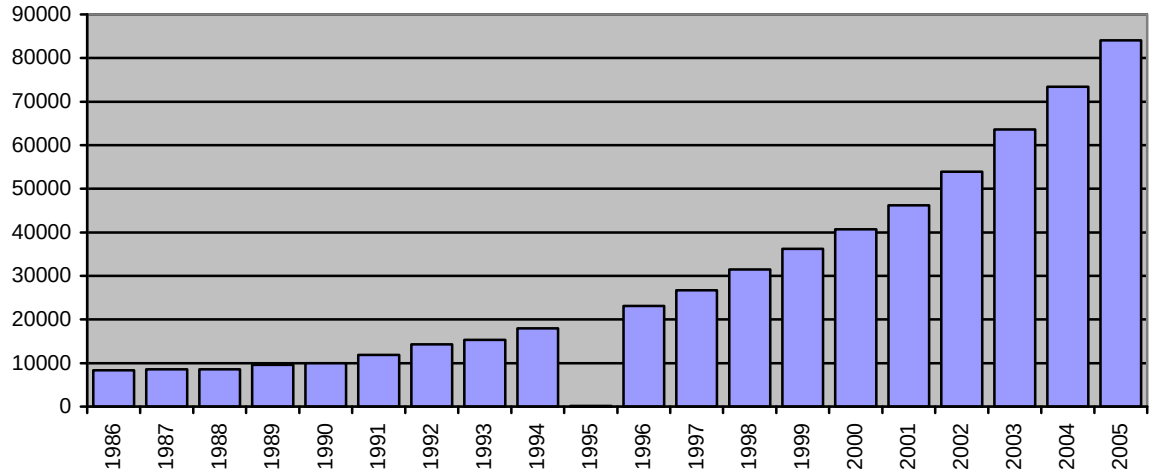
An evaluation of the reforms described them as "marginally successfully," with funding, for example, declining when it had been projected to increase in line with rising student enrolments, which expanded by 80.0 per cent over the project period (Girdwood, 1999). However, more recent assessments of the sector, which comprises technical institutes, polytechnics, universities, and certain specialized institutions, provide a mixed assessment of achievements in the sector. On the basis of data availability, only universities and polytechnics are reviewed here.

University outcomes

Between 1986 and 2006, the total number of university students rose from 8,342 to 84,078, an annual growth rate of 13.9 per cent (excluding 1995, when a teachers' strike shut down the universities for the whole year). Enrolment continues to increase at a rapid pace. According to the Ministry of Education, university enrolment rates were already 55.0 per cent higher than planned for by 2005. A significant reason for the increase was due to the creation of additional universities, namely the University College of Education (1992), University of Development Studies (1993) and the University of Mines and Technology. Over ten Private universities have also been established during this period. Unfortunately data for the 10 private universities are not available. Despite the increase in the number of universities and in the student population, the tertiary enrolment ratio for Ghana remains – at 3 per cent - one of the lowest in the world, and towards the lower end of the distribution in SSA..

The composition of courses at the universities also appears to be at variance with government policy. In their review of the tertiary sector, Addae-Mensah and Asare (2005) lamented the fact that "educational institutions, including those set up to promote science and technology education, are drifting away from the national norm of 60:40 science and humanities.[8]" Data in Table 5 attests to this observation. The 43:57 ratio in 1996/1997 declined steadily to 31:69 in 2002/2003, before improving gradually to 35:65 in 2006, but that figure is still considerably lower than the policy target of 60:40.

Figure 21: Total university enrolments (1986-2006)[9]



Source: National Council for Tertiary Education.

Polytechnics

There has also been rapid expansion within the Polytechnic sector where the admissions have almost tripled over the past decade. The trends relating to the science: humanity ratio at the polytechnics

[8] See, "Education and Literacy," in *Population Data Analysis Report*, Ghana Statistical Service, Accra, 2005, p. 248.
[9] As a result of a teachers' strike, universities were closed down for the 2005/2006 academic year; only the newly formed University for Development Studies was opened, with 171 students, compared with a total university population of 18,000 the previous year. ,

are even worse, where the ratio fell steadily from 55:45 in 1996 to a low of 35 (science):65 (Humanities) in 2005 (See Table 21). The Ministry of Education observed that:

> *It is worrying that this trend is appearing in the polytechnics, as it signals possible mission creep and is moving away from the ESP objective of prioritising the development of human resources in the field of science and technology.*[10]

Table 21: University enrolments - 1996-2005

Year	Science & Technology	Arts & Humanities	Ratios (ST:H)
1996/1997	9853	13272	43:57
1997/1998	11048	15636	41:59
1998/1999	12288	19213	39:61
1999/2000	16045	20176	44:56
2000/2001	14809	25864	36:64
2002/2003*	16673	36905	31:69
2003/2004	21341	42235	34:66
2004/2005	24714	48695	34:66
2005/2006	29623	54455	35:65

** Data for 2001/2002 not available.*

Table 22: Polytechnic enrolments - 1996-2005

Year	Science & Technology	Arts & Humanities	Ratios (ST:H)
1996/1997	4,057	3,363	55:45
1997/1998	5,122	4,820	52:48
1998/1999	6,382	6,581	49:51
1999/2000	7,874	9,082	46:54
2000/2001	8,161	10,298	44:56
2002/2003*	9,855	13,323	43:57
2003/2004	9,906	14,445	41:59
2004/2005	9,675	15,308	39:61
2005/2006	8,739	15,917	35:65

** Data for 2001/2002 not available*

Towards gender parity in tertiary education

The achievement of gender parity at all levels of education has been enshrined as a target for the MDGs and has been reflected in the reforms that have characterised Ghanaian education over past decades. Progress in this regard, however, has been slow and quite often mixed. For Ghana's the three main public universities – University of Ghana, Kwame Nkrumah University of Science and Technology (KNUST), and the University of Cape Coast (UCC) – which have been around since the commencement of the tertiary sector reforms, the average share of female enrolment doubled from 17.6 per cent to 34.7

[10] Ministry of Education, *Preliminary Education Sector Performance Report 2006,* Accra, June 2006, p.46.

per cent between 1986 and 2005, with the University of Ghana having the highest female enrolment rate of 40.6 per cent in 2005 – up from 19.3 per cent in 1986.

Although KNUST and UCC had near identical female enrolment rates in 1986 (16.5 per cent for the former and 16.2 per cent for the latter), by 2005, the rate for UCC had jumped to 33.4 per cent, while that of KNUST hovered around 29.1 per cent. The lower female enrolment rate in the nation's premier university for science and technology appear to suggest difficulties for the government's Science, Technology, and Mathematics Education (STME) Programme for Girls, which was launched in 1987 and decentralized to the districts 10 years later ostensibly to enhance its effectiveness.

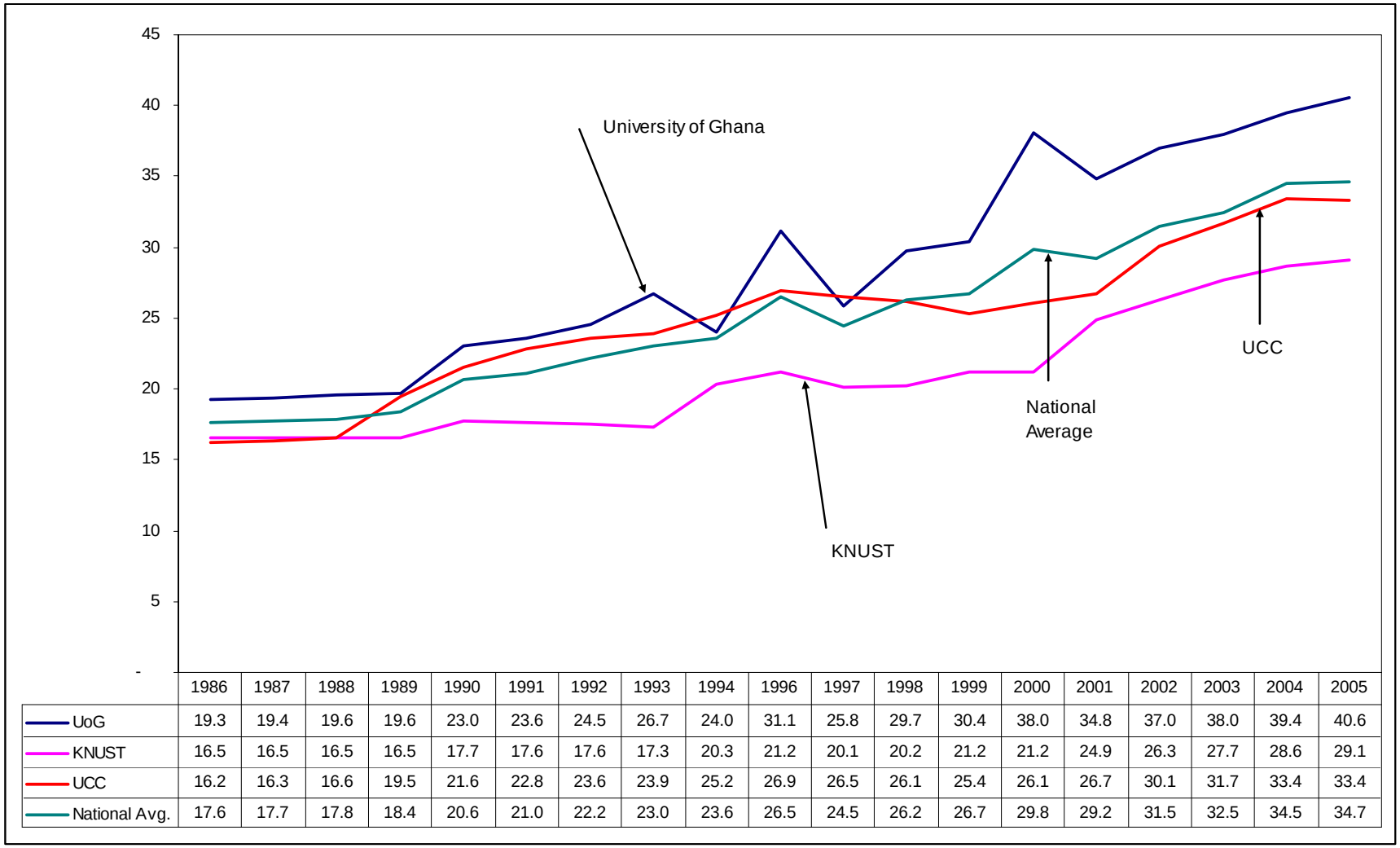
Over a shorter time span – 1993-2006 – female enrolment in the polytechnics had a somewhat encouraging growth pattern. The near-doubling of the female enrolment rate from 16.0 per cent in 1993 to 30.0 per cent in 2006 was evenly distributed across the five oldest polytechnics. The only exception was Ho Polytechnic, which already had the highest female enrolment rate of 24.0 per cent in 1993 and improved that record reaching 33.0 per cent in 2006, the highest rate of any polytechnic. Growth rates among the newer polytechnics (those not in existence in 1993) has also been rapid over the period.

Table 23: Female enrolment at polytechnics (% of total) 1993-2006

	Accra	Kumasi	Takoradi	Ho	C. Coast	Tamale	Sunyani	Koforidua	Wa	Bolga	Average
1993	13	14	16	24	17			-			16
1994	13	15	10	34	11	5		-			15
1995	17	17	16	33	11	3		-			18
1996	20	18	19	35	14	9	6	-			21
1997	24	20	18	25	16	7	14	14			21
1998	24	22	18	26	15	9	29	17			21
1999	22	25	21	31	15	10	17	16			21
2000	24	27	25	30	18	12	20	18			22
2001	29	29	28	30	21	15	21	24			24
2002	25	31	29	31	19	17	19	25			24
2003	25	32	33	32	26	27	25	28	27	25	28
2004	28	30	32	33	27	22	23	24	42	25	27
2005	26	29	31	33	31	43	25	31	29	26	30
2006	26	29	31	33	31	43	25	31	29	26	30

Source: Authors, based on data from NCTE

Figure 22: Female enrolment in universities (% share) 1986-2005)



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
UoG	19.3	19.4	19.6	19.6	23.0	23.6	24.5	26.7	24.0	31.1	25.8	29.7	30.4	38.0	34.8	37.0	38.0	39.4	40.6
KNUST	16.5	16.5	16.5	16.5	17.7	17.6	17.6	17.3	20.3	21.2	20.1	20.2	21.2	21.2	24.9	26.3	27.7	28.6	29.1
UCC	16.2	16.3	16.6	19.5	21.6	22.8	23.6	23.9	25.2	26.9	26.5	26.1	25.4	26.1	26.7	30.1	31.7	33.4	33.4
National Avg.	17.6	17.7	17.8	18.4	20.6	21.0	22.2	23.0	23.6	26.5	24.5	26.2	26.7	29.8	29.2	31.5	32.5	34.5	34.7

Chapter 6: Conclusion

Summary of findings

This study has attempted to capture trends and patterns in education expenditures and their associated outcomes since the 1987 educational reforms. The study found that prior to the reforms, previous governments had tried, with various degrees of success, to change both the structure and content of Ghana's education system in an attempt to improve the quality of the country's human resource base. The Accelerated Education Plan of 1951 succeeded in increasing enrolments by making primary education free while the Education Act of 1961 went a step further by making education compulsory. The resulting increase in enrolments was thought to have compromised quality, leading to a series of efforts to rectify the situation. However, these efforts, captured in the recommendations of various education review committees, were hampered by political instability as a succession of governments either altered or suspended existing reforms and initiated new ones.

The 1987 reforms have been the longest running in the country's history and thus lend themselves to long-term review with important lessons for current and future reforms. The reforms were launched at a time of severe economic and social crisis which required extensive donor assistance to address. As a result, donors, led initially by the World Bank and later the EU, USA, and the UK, have played a major role not only in financing the educational reforms but also helping shape their structure and content. The continued practice of some donors to provide assistance outside of the central government budgeting systems remains a source of displeasure among some government officials. The Education Sector Credit (I and II) and the Basic Education Sector Improvement Credit (BESIP) were among the vehicles that donors used to channel hundreds of millions of US dollars into the 1987 reforms. Among others things, these funds were spent on school buildings and rehabilitation, school furniture, teacher training, textbook supplies as well as teachers' housing.

As the economy recovered and government revenue rose (from under 5.0 per cent of GDP in 1983 to about 20.0 per cent in 2006), the Ghanaian government also increased the share of public expenditure going into the education sector. Over the period of the latest reforms, education-sector expenditure, as a share of GDP, increased from 1.4 per cent in 1987 to 5.7 per cent in 2006, although that is still lower than the 6.4 per cent recorded in 1976. Sources of financing have also been diversified beyond donors and the central government to include the GETFund, DACF, and HIPC funding.

Donor resources for education channelled through the central government, however, have followed an uneven trend, peaking at 8.8 per cent of total sector financing in 1999 only to fall to 5.2 per cent the following year. Partly as a result of the HIPC debt relief initiative, which required that such relieve be specifically allocated to social sectors like education, however, this share has since recovered, reaching as high as 7.9 per cent in 2004 before slowing down to 6.5 per cent in 2006. Donor resources *outside* of central government expenditures appear to have increased in recent years. The EU, USAID and UNICEF have all channelled substantial amounts of money directly to district assemblies. While this "extra-governmental" approach to education aid-giving may be convenient for the donors, officials at the Education Ministry have also complained about its distortionary effects on having a comprehensive view of total financial resources for planning purposes.

With regard to sector-specific spending, primary schools have continued to consume the largest share of the GES's budget, although that share has declined over the years as government channelled more resources towards secondary education and the tertiary sector. By 2004, the share of primary schools in the education budget was 40.6 per cent - down from 44.9 per cent a decade earlier. This, however, was due in part to the separation of "pre-school", from the primary school budget, starting from 2003. When combined with pre-school, the primary schools' share of education expenditures in 2004 was 46.2 per cent; followed by the share to JSS at 20.4 per cent. Key administrative sectors, whose effectiveness is important to ensure good-quality education, however, receive a disproportionately small share of the sector's budget. The "management and supervision" sector's budget, for example, has averaged less than 1.0 per cent of total education budget over the past decade. While there is no known optimal share for this

area, it is generally accepted within the education community that lack of resources for the management and supervision division has contributed to the near collapse of education quality in the country.

In terms of outcomes, the reforms appear to have yielded mixed results, with some indicators, such as GER, positing erratic trends, while others reflected steady though minimal progress. The number of years for pre-tertiary education was successfully reduced from 17 to 12 and the number of schools, along with enrolments, increased in absolute numbers over the years. But the reforms have been less successful in pursuing vocational and technical education due to lack of resources and facilities. Following a steady increase in the first decade of the reforms, the proportion of trained teachers in primary schools has been declining since 1998, reaching 56.3 per cent in 2005, lower than the 57.4 per cent recorded in 1987. At the JSS level, however, the decline since the late 1990s has been less pronounced, falling from 86.5 per cent in 1999 to 70.7 per cent, marginally better than the 1987 figure of 68.0 per cent. Overall, the system continues to suffer from shortfalls in the supply of teachers, especially in the rural areas.

With respect to performance, there have been some improvements in the recent past, but they have been marginal, leaving large segments of the basic education student population struggling to attain competency in mathematics and English. This is often the case in public schools, despite the fact that these schools on average have higher proportions of trained teachers.

Some progress has also been made in closing the gap between male and female enrolments at the basic levels, although complete parity remains illusive. Interventions such as the World Food Programme's *Girls Education Incentives Programme* have been helpful but not enough to close the gap.

Lessons learned

Perhaps the most important lesson learned from the study is the difficulty of conducting such research in an environment of fragmentary data sources and lack of internal consistency in data. For example, it was not uncommon for the team to see contradictory information on the same set of indicators in different publications by the same Ministry. This meant that in many instances, team members had to re-compute figures and indicators in order to obtain consistent and comprehensible data. As Ghana embarks on a full implementation of its modified Education Strategic Plan, it is exceedingly important that a comprehensive, timely, well preserved and above all accurate database is created immediately by the Ministry of Education to facilitate effective monitoring and evaluation of the Education Sector Plan.

Institutional capacity remains a problem for the education sector in Ghana. Official reports indicate that between 2000 and 2004, some funds were returned to donors due to the inability of central government and the Ministry of Education to fully utilise these funds. Also, despite the sector-wide approach to education reforms, some donors continue to fund projects and programmes directly, without recourse to the government's priorities. Evaluation of some of these projects reveals that despite large levels of donor assistance, very little sustainable impact has been felt or remains visible in the system. Two cases in point are the Quality Improvement in Primary Schools (QUIPS) project supported by USAID and the Whole School Development programme financed by the UK's Department for International Development.

Several questions arise from the Education Financing Study that require further investigation; these include:

- Has there been adequate funding for the Ministry of Education to attain the EFA goals, particularly for reform within the primary and JSS sectors?
- Were the problems related to moderate educational outcomes due to lack of financing, sourcing and securing the financing or was the problem in relation to the MOESS's capacity to use and implement resources for any given levels of financing?
- To what degree is a shift towards more flexible and fungible financing (i.e. MDBS mechanisms or sector wide mechanisms channelled through the Ministry of Finance), improving the implementation and impact of donor financing within the sector?

- Why did donor programmes fail to be sustained by Government and the Ministry of Education, despite the involvement and ownership of many of these programmes, such as Whole School Development?
- What are the bottlenecks to increased financing to the district and regional levels of Government?
- Why is budget and planning between the Ministry of Education and the Ghana Education Service not coordinated to avoid waste and duplication?
- Given the inequities in educational outcomes from a regional point of view, what more can be done to improve equity and ensure that government and donor financing is more equitably and effectively targeted?
- What influences continue to disrupt the smooth flow of policy-relevant knowledge from research institutions to Government?

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APPENDICES

Annex 1: Excerpts from the Terms of Reference

The initial aim of this paper is to develop a summary of the most important expenditure trends and the educational outcomes that accompanied them over the period since 1990. The following tables covering, where possible, each year since 1990, were produced:

1. Enrolment trends by sex, grade and level of education over the study period.
2. Gross and net enrolment rates for the same years.
3. Promotion rates by grade for selected years
4. Number of teachers (rural/urban) and % female over the study period
5. Proportion of qualified teachers by rural/urban and level of education
6. Number of pupils per English textbook
7. Number of pupils per maths textbook
8. Proportion of first grade children entering school at the correct age

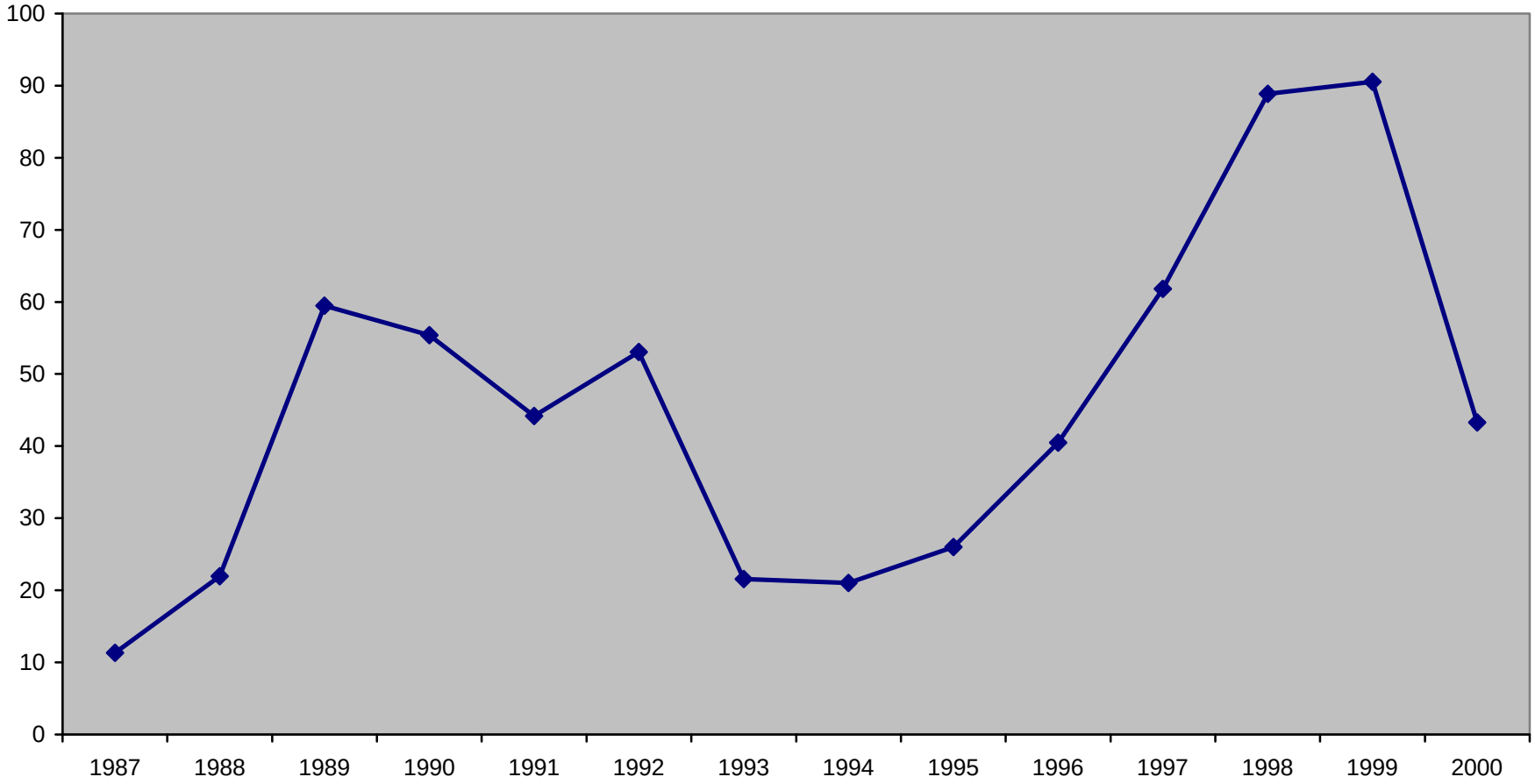
The following economic/financial tables are to be produced, again for each year of the study period:

1. GDP per capita in real and PPP terms
2. Composition of the public budget a) in constant price terms, and b) as % GDP (tax revenue, non-tax revenue, grants; recurrent expenditure, development expenditure, budget surplus/deficit
3. Sectoral recurrent expenditure a) in constant price terms, and b) as % of total recurrent (general admin, defence, social and community services, education….etc)
4. Sectoral development expenditure (as for 3 above)
5. Intra sectoral recurrent expenditure as % of total recurrent (primary, secondary, technical, tertiary, etc)
6. Recurrent expenditure per student in units of national currency (constant prices) for primary, secondary, technical, tertiary, etc
7. Intrasectoral development expenditure as % of total education development spending (same categories as 5, above)
8. analysis of recurrent budget (% salaries, teaching materials, maintenance, other) in primary and secondary education separately
9. Teachers' salaries by grade/qualification level in real terms
10. Analysis of development budget % (construction, purchase of furniture, purchase of textbooks, etc)
11. Total international aid receipts by agency and intended sectoral destination
12. Total international aid receipts for education and sub-sectoral allocation (by agency if possible)
13. Total aid receipts by type of aid (project, programme, SWA, budget support, HIPC, grants/loans, capital aid, recurrent support, technical assistance, etc)
14. As for 13, but aid to education only
15. Intrasectoral (primary, secondary, tertiary, etc) education development expenditure as % of total education development expenditure by source of funding (domestic/external)
16. Total household expenditures on education per child at each level of education, by type of school (public, aided, private, etc)
17. Distribution of public expenditures on education across poorest and richest income groups.

Annex 2: Donor support for education, 1987-2002, in millions of US$

	Total	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
HERP	3.47	0.62	0.68	0.93	0.62	0.62											
EdSAC I	38.32	9.36	3.16	4.67	9.90	10.21	1.02										
EdSAC II	53.20					13.30	10.60	8.70	4.60	16.00							
CSSC	15.18						5.41	4.31	3.26	2.20							
Literacy and functional skills	10.63						0.00	2.02	1.39	2.51	2.64	2.07					
Tertiary education project	44.80							3.20	0.60	8.20	12.20	15.40	4.20	1.00			
PSD	53.20								2.50	9.20	20.30	15.20	5.90	0.10			
Vocational Skills	5.80										0.80	0.80	0.40	1.50	1.30	1.00	
BESIP												1.28	2.57	1.28	17.30	12.37	10.70
National functional literacy																1.00	4.00
Total World Bank	271.7	9.4	3.2	4.7	9.9	23.5	17.0	18.2	12.4	38.1	35.9	34.7	13.1	3.9	18.6	14.4	14.7
Total Bilaterial (DAC)	317.3	1.2	0.9	6.9	12.3	18.6	19.2	5.0	3.3	13.4	24.4	56.2	104.4	37.3	14.2	n.a	n.a
Total Donor	589	10.6	4.1	11.6	22.2	42.1	36.2	23.2	15.7	51.5	60.3	90.9	117.5	41.2	32.8	14.4	14.7
Bank share of total (%)	46.1	88.7	78.0	40.5	44.6	55.8	47.0	78.4	79.0	74.0	59.5	38.2	11.1	9.5	56.7	100.0	100.0
Non-Bank share of total (%)	53.9	11.3	22.0	59.5	55.4	44.2	53.0	21.6	21.0	26.0	40.5	61.8	88.9	90.5	43.3		
Source: *World Bank 2004.*		11.32	21.95	59.48	55.41	44.18	53.04	21.55	21.02	26.02	40.46	61.83	88.85	90.53	43.29		

Annex 3: Bilateral shares of education aid (1987-2000), %



Annex 4: Real Government Expenditures (1999-2006)

Real Recurrent Expenditures (Millions of constant US$ at 2006 prices)								
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Statutory Recurrent	781.3	1,255.5	1,011.3	1,146.4	1,115.2	922.3	1,088.5	1,122.6
Debt Service	716.1	1,173.7	945.7	1,010.7	963.9	745.4	734.7	758.7
Foreign	387.6	738.6	422.9	574.9	530.1	393.6	436.2	494.3
Domestic interest	328.5	435.1	522.8	435.8	433.8	351.8	298.5	264.4
Transfers	65.2	81.8	65.6	135.7	151.3	176.9	353.8	363.9
Discretionary Recurrent	716.5	799.2	984.1	1,344.8	1,456.3	2,006.1	1,961.9	1,856.7
Personal Emoluments	571.1	588.6	687.4	827.7	881.1	960.2	1,049.2	1,088.4
Administration	82.9	210.7	162.4	212.9	171.2	199.0	194.9	238.2
Services	62.5	-	-	73.5	103.1	127.2	117.2	88.1
Road Arrears Clearance	-	-	50.7	41.3	34.8	-	-	-
Non-road Arrears Clearance	-	-	100.2	133.1	61.5	-	-	-
Net Lending	-	-	-	-	-	25.3	11.8	4.3
Strategic Oil Stocks	-	-	-	-	-	-	17.5	15.8
VAT Refunds	-	-	6.1	10.6	7.5	7.6	8.7	10.9
Outstanding Commitments	-	-	-	-	-	37.4	135.1	37.8
Utilities Price Subsidies	-	-	-	88.7	42.4	305.1	49.8	-
Other Transfers	-	-	-	-	-	1.7	42.3	38.1
HIPC-financed Expenditures	-	-	-	34.5	134.8	258.4	195.1	198.5
Divestiture Liabilities	-	-	32.5	1.1	-	-	-	-
Domestic Debt Repayment	-	-	-	-	-	-	120.4	127.2
Redemption of GGILB	-	-	-	-	-	48.3	20.0	9.4
Discrepancy	-	-	(55.2)	(78.8)	19.8	35.7	-	-
Total Recurrent Expenditures	1,497.7	2,054.8	1,995.4	2,491.1	2,571.5	2,928.4	3,050.4	2,979.4
Total Recurr./Total Gov't (%)	68.0	68.9	75.5	81.8	75.1	72.8	70.8	70.2
Real Capital Expenditures (Millions of Constant US$ 2006 at prices)								
Statutory Capital Expenditures	62.2	144.4	228.1	170.2	291.2	315.1	387.8	401.8
DACF	62.2	58.1	33.6	50.9	90.5	103.6	129.3	131.2
GETFund	-	9.6	31.7	32.5	110.2	113.8	142.0	151.0
Road Fund	-	76.7	162.8	61.5	80.3	88.4	106.7	116.5
Petroleum Fund	-	-	-	25.3	10.3	9.3	9.7	3.1
Discretionary Capital Expend.	642.3	784.2	421.0	384.8	561.1	777.2	872.1	864.6
Investments	642.3	784.2	421.0	384.8	561.1	777.2	872.1	864.6
Domestic-financed	307.0	379.3	48.6	59.1	81.7	139.8	172.5	183.5
Foreign-financed	335.3	404.9	372.4	325.7	479.4	637.4	699.6	681.1
Total Capital Expenditures	704.4	928.6	649.0	555.0	852.3	1,092.3	1,259.9	1,266.5
Total Capital./Total Gov't (%)	32.0	31.1	24.5	18.2	24.9	27.2	29.2	29.8
Total Government Expenditure	2,202	2,983	2,644	3,046	3,424	4,021	4,310	4,246

Annex 5: Selected fiscal and economic indicators of Ghana (Millions of US$ at 2006 prices)

	1999	2000	2001	2002	2003	2004	2005	2006
Tax Revenue	1,164	1,328	1,484	1,686	2,082	2,406	2,434	2,635
Foreign Grants	114	173	356	301	485	683	616	839
Non-tax Revenue	117	119	79	50	57	157	152	77
Nominal GDP	7,752	8,170	8,606	9,419	10,297	11,031	11,638	12,518
Budget Deficit/surplus (%)	-6.5	-8.5	-7.2	-5.3	-3.3	-3.2	-2.0	-4.9
				Share of GDP (%)				
Tax Revenue	15.0	16.3	17.2	17.9	20.2	21.8	20.9	21.0
Foreign Grants	1.5	2.1	4.1	3.2	4.7	6.2	5.3	6.7
Non-tax Revenue	1.5	1.5	0.9	0.5	0.5	1.4	1.3	0.6
Budget Deficit/surplus	-6.5	-8.5	-7.2	-5.3	-3.3	-3.2	-2	-4.9

Source: Ministry of Finance and Economic Planning

Annex 6: Government Expenditures by Function (Millions of US$ at 2006 prices)

	1999	2000	2001	2002	2003	2004	2005	2006
Administration	385.7	602.2	492.5	287.0	228.2	304.0	295.9	311.5
Economic	148.2	187.6	211.9	261.1	148.8	158.2	226.9	239.4
Infrastructure	304.2	192.7	164.4	249.4	255.3	193.7	368.3	410.5
Social	435.9	437.9	426.5	503.3	624.5	688.2	820.7	1,075.3
Public Safety	145.0	152.2	112.2	140.1	187.6	206.9	151.6	203.0
Total Contingency	14.4	5.6	5.6	9.0	62.9	125.5	235.8	107.4
Grand Total	1,433.4	1,578.2	1,413.1	1,450.0	1,507.4	1,676.5	2,099.2	2,347.1

Source: Minsitry of Finance and Economic Planning

Annex 7: Total Foreign Aid by Agency and Sector (Millions of current US$), 2003-2007

	Actual Disbursements				Estimates	
	2003	**2004**	**2005**	**2003-2005**	**2006**	**2007**
Total	883.06	987.00	1,096.30	2,966.37	1,296.45	1,241.96
Total Credits	376.22	368.94	490.09	1,235.26	576.37	466.37
Total Grants	506.84	618.06	606.21	1,731.11	720.08	775.59
Credits as Percentage of Total Di	42.60	37.38	44.70	41.64	44.46	37.55
Grants as Percentage of Total Dis	57.40	62.62	55.30	58.36	55.54	62.45
Total Aid by Source (Milliions of current US$)						
	2003	2004	2005	2003 - 2005	2006	2007
World Bank	246.17	297.17	330.67	874.01	342.15	323.61
IMF	73.83	39.03	78.02	190.88	76.78	
ADB	54.53	40.76	45.02	140.31	90.77	82.93
EU	77.82	59.52	99.90	237.24	105.71	195.62
Canada	11.80	35.92	41.13	88.85	48.83	48.83
Denmark	48.36	51.48	47.72	147.57	51.62	51.50
France	6.61	24.85	32.23	63.69	27.80	50.52
Germany	25.23	44.72	51.58	121.53	54.61	48.55
Italy	1.65	2.64	3.94	8.22	16.63	2.09
Japan	22.88	30.89	36.66	90.44	36.01	31.61
Netherlands	87.05	76.91	76.91	240.87	90.15	90.15
Nordic Development Fund	1.81	0.25	2.46	4.52	5.90	9.72
Spain	10.00	15.00	15.00	40.00	22.94	34.38
Switzerland	5.63	7.45	8.37	21.45	11.47	10.65
United Kingdom	98.01	138.62	113.64	350.27	150.49	101.10
United States	58.23	67.67	61.96	187.86	81.83	75.74
FAO	1.72	4.97	1.97	8.66	2.07	2.80
IFAD	8.35	9.13	5.81	23.29	9.77	7.37
ILO	0.82	1.14	1.50	3.46	1.06	0.50
IOM	0.69	0.35	0.42	1.46	0.33	0.23
UNAIDS	0.57	0.41	0.28	1.26	0.35	0.35
UNESCO	0.15	0.38	0.44	0.97	0.28	0.28
UNFPA	5.00	5.00	5.00	15.00	6.00	6.00
UNICEF	7.07	10.64	11.66	29.37	12.27	12.27
UNIDO	2.80	2.00	1.00	5.80	1.65	3.20
UNDP	4.69	7.48	6.30	18.48	7.32	8.38
WFP	0.89	3.47	2.16	6.52	3.35	3.28
WHO	6.32	5.08	5.68	17.08	6.43	6.43
Global Fund	14.37	4.08	8.86	27.32	31.87	33.87
Total	883.06	987.00	1,096.30	2,966.37	1,296.45	1,241.96

Soure: World Bank

Annex 8: Total Foreign Aid by Type (Millions of current US$), 2003-2007

	2003	2004	2005	2003-2005	2006	2007
IMF Balance of Payments support to Bank of Ghana	73.83	39.03	78.02	190.88	76.78	NA
Budget Support (MDBS)	264.30	310.91	290.59	865.80	331.54	290.27
Credits	129.57	105.59	171.22	406.38	184.47	131.89
Grants	134.73	205.32	119.37	459.42	147.07	158.38
Sector and Investment Support	544.93	637.07	727.69	1,909.69	888.12	951.68
Credits	172.82	224.33	240.85	638.00	315.12	334.48
Grants	372.12	412.74	486.84	1,271.69	573.01	617.21
of which Ghana Poverty Reduction Strategy:						
Pillar 1: Private Sector Competitiveness	236.79	293.77	336.82	867.37	468.75	585.45
Agriculture	92.45	103.11	94.05	289.61	180.79	202.92
Private and Financial Sector Development	37.19	37.14	53.02	127.35	86.82	92.74
Energy	7.98	9.14	20.39	37.51	26.94	80.98
Other Infrastructure (mainly Roads)	99.17	144.37	169.36	412.91	174.19	208.81
Pillar 2: Human Development and Basic Services	270.92	297.08	346.66	914.67	339.17	293.93
Health (incl. HIV/AIDS)	160.91	184.51	184.99	530.42	155.50	110.16
Education	47.60	57.25	96.33	201.17	93.23	56.98
Water and Sanitation	62.42	55.32	65.34	183.08	90.44	126.79
Pillar 3: Good Governance and Civic Responsibility	37.23	46.22	44.21	127.65	80.21	72.30
Public Financial Management	5.75	1.96	2.70	10.41	8.55	7.46
Public Sector Reform	6.53	4.52	0.00	11.05	5.17	6.01
Decentralization	8.78	11.79	18.19	38.76	28.88	27.51
Other Governance (incl. M&E)	16.16	27.94	23.32	67.43	37.61	31.32
Direct Support to NGOs and Decentralised Government (not included in above)	24.79	22.73	23.97	71.49	25.60	26.55

Source: World Bank

Annex 9: Total Foreign Aid to Education Sector (Millions of current US$), 2003-2007

Donor Aid to Education Sector under GPRS (2003-2007)								
	(In millions of current US dollars)*				(Donor shares of education aid, %)			
	2003	2004	2005	2003-2005	2003	2004	2005	2003-2005
Total	47.6	57.2	96.3	201.2	1525.485	519.4904	395.9192	522.92731
Credits	3.1	11.0	24.7	38.5	100.0	100.0	101.4	100.0
Grants	44.5	46.2	71.7	162.4	1,425.5	419.5	294.5	422.0
World Bank	3.1	11.0	24.3	38.5	100.0	100.0	100.0	100.0
ADB	-	-	0.3	0.3	-	-	1.4	0.9
EU	4.2	1.3	2.9	8.4	133.3	12.1	12.0	21.9
France	0.9	1.1	1.3	3.2	27.7	9.9	5.3	8.4
Germany	0.4	0.2	0.2	0.8	11.6	1.7	0.9	2.0
Japan	1.5	1.1	6.4	8.9	46.8	9.6	26.4	23.2
Netherlands	2.4	3.7	7.3	13.4	78.3	33.2	30.1	34.9
Spain	-	-	15.0	15.0	-	-	61.7	39.0
United Kingdom	14.7	15.7	13.8	44.3	471.2	142.7	56.9	115.1
United States	17.5	18.2	19.2	54.9	560.8	164.8	79.0	142.7
ILO	-	0.1	0.1	0.2	-	0.9	0.5	0.6
UNESCO	0.1	0.4	0.4	1.0	4.7	3.5	1.8	2.5
UNICEF	1.5	1.7	1.9	5.1	48.1	15.9	7.7	13.3
UNDP	0.9	1.1	1.8	3.7	27.7	9.7	7.4	9.7
WFP	0.5	1.7	1.2	3.4	15.4	15.4	4.9	8.7

* Estimates

Source: World Bank - Accra

Annex 10: Donor financing of education sector in US$ at constant 2006 prices)

	2003		2004		2005		2006	
	Level	% Share	Level	% Share	Level	% Share	Level	% Share
	Broad education sector							
Pre-school	442,970	1.1	402,940	0.8	354,757	0.6	3,974,834	5.3
Primary School	26,652,775	68.8	25,105,001	51.5	28,456,106	49.0	27,876,566	37.0
Junior Secondary School	7,836,653	20.2	14,029,900	28.8	10,358,528	17.8	10,317,682	13.7
Senior Secondary School	-	-	-	-	905,260	1.6	17,699,749	23.5
TVET	87,473	0.2	-	-	685,349	1.2	565,312	0.8
SPED	-	-	-	-	-	-	-	-
NFED	3,611,002	9.3	-	-	148,984	0.3	634,601	0.8
Teacher Education	87,473	0.2	-	-	998,057	1.7	2,823,510	3.8
Tertiary	-	-	9,205,130	18.9	16,060,382	27.6	9,515,416	12.6
Management and Supervision	-	-	-	-	145,721	0.3	-	-
HIV-AIDS	-	-	-	-	-	-	1,866,434	2.5
Total	38,718,347	100.0	48,742,971	100.0	58,113,143	100.0	75,274,104	100.0
	Basic education sector only							
	2003		**2004**		**2005**		**2006**	
	Level	% Share	Level	% Share	Level	% Share	Level	% Share
Pre-school	442,970	1.3	402,940	1.0	354,757	0.9	3,974,834	9.4
Primary School	26,652,775	76.3	25,105,001	63.5	28,456,106	72.6	27,876,566	66.1
Junior Secondary School	7,836,653	22.4	14,029,900	35.5	10,358,528	26.4	10,317,682	24.5
Total	########	100.0	39,537,841	100.0	39,169,391	100.0	#########	100.0

Annex 11: GoG Education Expenditure by Sector, 1997-2006

Expenditure by Level of Education - GoG only. (Percent shares)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Pre-school		-	-	-	-	-	2.5	4.2	3.6	3.8
Primary School	40.4	40.4	37.2	38.6	41.0	40.9	37.8	30.3	28.6	26.8
Junior Secondary School	23.9	22.9	24.0	23.1	24.3	24.0	22.2	15.2	17.8	17.0
Senior Secondary School	15.1	14.6	14.6	15.8	13.6	14.4	16.3	21.2	22.1	15.2
TVET	1.0	1.1	0.9	1.0	1.1	1.0	1.2	1.2	1.2	0.9
SPED	-	-	-	-	-	-	0.4	0.4	0.4	0.4
NFED	-	-	-	-	-	-	0.4	1.7	2.0	0.7
Teacher Education	4.7	5.5	7.1	6.0	5.4	4.7	4.2	3.9	4.1	3.5
Tertiary	13.9	14.2	15.3	15.0	13.8	14.2	14.8	21.1	19.0	23.3
Management and Supervision	1.1	1.1	0.9	0.6	0.8	0.8	0.1	0.5	1.1	8.3
HIV-AIDS	-	-	-	-	-	-	0.1	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Expenditure by Level of Education - GoG only. (Mi. of US$ in 2006 prices and exchange)
less Pre-Schools, SPED, NFED, AND HIV-AIDS

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Primary School	89.8	88.9	101.3	109.9	131.9	165.0	227.9	228.0	237.5	258.2
Junior Secondary School	53.0	50.5	65.2	65.9	77.9	96.8	133.9	114.1	148.0	163.9
Senior Secondary School	33.6	32.2	39.8	45.0	43.7	58.2	98.1	159.4	184.1	146.1
TVET	2.2	2.5	2.6	2.8	3.6	4.1	7.0	8.8	10.0	8.8
Teacher Education	10.4	12.2	19.3	17.1	17.3	18.9	25.6	29.6	33.7	33.3
Tertiary	30.8	31.4	41.5	42.6	44.3	57.1	89.1	159.0	158.3	224.2
Management and Supervision	2.4	2.5	2.4	1.7	2.5	3.2	0.6	4.0	8.7	80.0
Total	222.1	220.2	272.1	285.1	321.3	403.2	582.1	702.9	780.3	914.6

(Percent shares)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Primary School	40.4	40.4	37.2	38.6	41.0	40.9	39.1	32.4	30.4	28.2
Junior Secondary School	23.9	22.9	24.0	23.1	24.3	24.0	23.0	16.2	19.0	17.9
Senior Secondary School	15.1	14.6	14.6	15.8	13.6	14.4	16.9	22.7	23.6	16.0
TVET	1.0	1.1	0.9	1.0	1.1	1.0	1.2	1.3	1.3	1.0
Teacher Education	4.7	5.5	7.1	6.0	5.4	4.7	4.4	4.2	4.3	3.6
Tertiary	13.9	14.2	15.3	15.0	13.8	14.2	15.3	22.6	20.3	24.5
Management and Supervision	1.1	1.1	0.9	0.6	0.8	0.8	0.1	0.6	1.1	8.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Expenditure by Level of Education - GoG only. (Percent change)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Pre-school		-	-	-	-	-	-	111.7	-5.5	22.1
Primary School		-1.0	13.9	8.5	20.0	25.1	38.1	0.0	4.2	8.7
Junior Secondary School		-4.7	29.1	1.0	18.3	24.2	38.3	-14.7	29.7	10.8
Senior Secondary School		-4.1	23.5	13.2	-2.8	33.0	68.7	62.5	15.5	-20.6
TVET		12.5	1.8	9.8	27.2	14.8	68.7	26.5	13.4	-11.9
SPED		0.0	0.0	0.0	0.0	0.0	0.0	24.9	11.1	17.4
NFED		0.0	0.0	0.0	0.0	0.0	0.0	493.5	30.7	-60.0
Teacher Education		17.8	58.5	-11.8	1.4	9.1	35.4	15.9	13.7	-1.3
Tertiary		1.9	32.4	2.6	4.0	28.7	56.2	78.4	-0.4	41.7
Management and Supervision		3.1	-2.7	-28.1	47.7	26.3	-80.0	524.6	118.5	814.4
HIV-AIDS		0.0	0.0	0.0	0.0	0.0	0.0	149.9	-44.5	-6.8
Total		-0.9	23.6	4.8	12.7	25.5	49.4	24.9	10.5	15.8

Annex 12: Education Financing: GoG, Donor, and Other Sources (US$ in 2006 prices) 1999-2006

	1999	2000	2001	2002	2003	2004	2005	2006
GoG	350,523,485.8	341,966,840.0	385,210,049.6	472,312,564.6	525,623,840.3	541,646,437.5	586,695,533.8	706,314,086.5
Donor	34,030,126.4	18,734,496.2	27,268,739.2	39,353,102.7	28,627,619.6	58,069,190.4	74,763,779.7	24,496,568.3
IGF	-	-	-	-	-	73,037,531.5	83,393,952.8	111,382,939.3
GETFund	-	-	-	-	62,258,656.1	75,756,786.1	86,461,951.3	125,491,230.0
HIPC	-	-	-	-	17,636,787.7	37,906,591.9	37,814,522.2	48,546,137.9
DACF	-	-	-	-	7,004,098.8	14,492,001.6	10,439,725.5	15,056,977.9
EFA Catalytic	-	-	-	-	-	-	4,210,930.9	3,035,189.0
SIF	-	-	-	-	-	-	5,739,432.4	3,747,467.0
Total	384,553,612.1	360,701,336.3	412,478,788.8	511,665,667.4	641,151,002.5	800,908,538.9	889,519,828.6	1,038,070,595.9

Annex 13: Total Expenditure by Level of Education (US$ in 2006 prices) 1999-2006

	1999	2000	2001	2002	2003	2004	2005	2006
Pre-school	-	-	-	-	14,944,568	31,633,402	29,888,910	36,492,319
Primary School	101,303,370	109,946,443	131,884,675	165,013,995	227,882,246	227,982,098	237,510,279	258,240,876
Junior Secondary School	65,225,908	65,895,949	77,949,930	96,797,946	133,856,733	114,115,467	147,975,979	163,907,833
Senior Secondary School	39,765,906	45,000,855	43,747,831	58,164,492	98,095,361	159,380,799	184,114,829	146,133,784
TVET	2,575,121	2,827,181	3,595,799	4,128,815	6,965,187	8,809,994	9,988,908	8,803,791
SPED	-	-	-	-	2,564,590	3,203,634	3,558,086	4,178,669
NFED	-	-	-	-	2,159,286	12,814,537	16,751,893	6,704,870
Teacher Education	19,326,812	17,055,251	17,292,007	18,870,855	25,558,423	29,633,616	33,693,247	33,257,762
Tertiary	41,536,944	42,633,419	44,336,064	57,063,695	89,119,375	158,985,717	158,285,450	224,240,440
Management and Supervision	2,385,950	1,715,775	2,534,943	3,200,624	641,109	4,004,542	8,749,432	80,006,972
HIV-AIDS	-	-	-	-	641,109	1,601,817	889,552	829,175
Total	272,120,009	285,074,873	321,341,250	403,240,421	602,427,986	752,165,622	831,406,565	962,796,492

Annex 14: Real unit cost of education (in US$ at 2006 prices)

	2002	2003	2004	2005	2006
Unit cost of education, adjusted for inflation at 2006 prices and exchange rates, US$					
Pre-school	69.31	27.20	58.60	38.73	39.14
primary	82.68	101.96	95.79	77.28	102.86
JSS	161.55	170.80	143.19	116.72	172.58
SSS	267.88	277.69	358.51	203.49	277.05
SPED	685.90	549.54	1,358.61	663.75	903.94
Teacher Education	1,037.57	1,296.80	1,173.55	1,219.87	1,225.21
TVET	427.47	305.72	402.78	298.89	516.25
Tertiary	1,170.10	1,384.84	1,366.45	849.76	1,337.32

Sources: ESPR 2006 & 2007. Applies to public institutions only.

	Real percent change			
Pre-school	(60.76)	115.47	(33.92)	1.07
primary	23.32	(6.06)	(19.32)	33.10
JSS	5.73	(16.17)	(18.49)	47.86
SSS	3.66	29.10	(43.24)	36.15
SPED	(19.88)	147.23	(51.14)	36.19
Teacher Education	24.98	(9.50)	3.95	0.44
TVET	(28.48)	31.75	(25.79)	72.72
Tertiary	18.35	(1.33)	(37.81)	57.38

Sources: ESPR 2006 & 2007. Applies to public institutions only.

Annex 15: Trends in real teacher salaries (in constant US$ at 2006 prices)

	1999	2000	2001	2002	2003	2004	2005	2006
Certificate A	917.4	954.8	1,400.5	1,610.8	1,542.5	1,500.1	1,716.5	1,857.1
Senior. Superintendent	1,503.3	1,595.3	2,073.3	2,396.3	2,339.7	2,297.7	2,629.1	2,844.5
Principal Superintendent	1,700.8	1,813.8	2,363.0	2,737.8	2,699.2	2,743.5	3,047.8	3,297.6
Assistant Director	2,119.4	2,344.6	2,693.1	3,127.9	3,114.0	3,087.9	3,533.2	3,822.8

Source: AFC based on GES data

Annex 16: Number of primary schools, JSS and SSS, 1987-2006

PRIMARY																			
	87/88	**88/89**	**89/90**	**90/91**	**91/92**	**92/93**	**93/94**	**94/95**	**95/96**	**96/97**	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**	**05/06**
Public	9,424	9,368	9,831	10,623	11,142	11,270	11,369	11,218	11,435	11,765	11,236	11,581	11,916	11,750	12,066	11,747	11,895	12,406	12,227
Private	145				570	740	951	916	954	1,249	1,090	1,546	2,163	2,215	2,510	2,224	2,724	3,622	3,080
Total	9,569	9,368	9,831	10,623	11,712	12,010	12,320	12,134	12,389	13,014	12,326	13,127	14,079	13,965	14,576	13,971	14,619	16,028	15,307
% Private	1.5	-	-	-	5.1	6.6	8.4	8.2	8.3	10.6	9.7	13.3	18.2	18.9	20.8	18.9	22.9	29.2	25.2

JSS																			
	87/88	**88/89**	**89/90**	**90/91**	**91/92**	**92/93**	**93/94**	**94/95**	**95/96**	**96/97**	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**	**05/06**
Public	5,260	5,169	5,136	5,136	5,263	5,252	5,374	5,459	5,639	5,879	6,020	5,896	6,054	6,133	6,311	6,266	6,304	6,637	7,130
Private					128	123	157	218	245	282	449	504	775	877	1,028	1,015	1,322	1,786	1,619
Total	5,260	5,169	5,136	5,136	5,391	5,375	5,531	5,677	5,884	6,161	6,469	6,400	6,829	7,010	7,339	7,281	7,626	8,423	8,749
% Private	-	-	-	-	2.4	2.3	2.9	4.0	4.3	4.8	7.5	8.5	12.8	14.3	16.3	16.2	21.0	26.9	22.7

SSS																			
	87/88	**88/89**	**89/90**	**90/91**	**91/92**	**92/93**	**93/94**	**94/95**	**95/96**	**96/97**	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**	**05/06**
Public	239	245	250	404	413	438	452	452	453	456	NA	NA	NA	NA	NA	NA	NA	NA	412
Private					40	43	49	51	46	48	NA	NA	NA	NA	NA	NA	NA	NA	94
Total	239	245	250	404	453	481	501	503	499	504	NA	NA	NA	NA	NA	NA	NA	NA	506
% Private	-	-	-	-	9.7	9.8	10.8	11.3	10.2	10.5	NA	NA	NA	NA	NA	NA	NA	NA	22.8

Source: Education Forum, 1999; GES, 2000-2006.

Annex 16: Pre-school Enrolment (Levels)

	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
PUBLIC AND PRIVATE SCHOOLS								
Boys	307,891	340,151	328,532	350,878	384,197	413,029	480,216	590,354
Girls	301,493	332,691	321,135	471,526	508,112	404,643	641,595	591,266
Total	609,384	672,842	649,667	822,404	892,309	817,672	1,121,811	1,181,620
% Girls	49.5	49.4	49.4	57.3	56.9	49.5	57.2	50.0
REPEATERS								
Boys	14,847	17,837	22,040	26,731	22,860	27,460	33,258	18,467
Girls	13,344	16,310	20,241	24,397	20,400	24,573	29,680	17,957
Total	28,191	34,147	42,281	51,128	43,260	52,033	62,938	36,424
% Girls	47.3	47.8	47.9	47.7	47.2	47.2	47.2	49.3
% REPEATERS								
Boys	4.8	5.2	6.7	7.6	6.0	6.6	6.9	3.1
Girls	4.4	4.9	6.3	5.2	4.0	6.1	4.6	3.0
Total	4.6	5.1	6.5	6.2	4.8	6.4	5.6	3.1
PUBLIC SCHOOLS								
Boys	226,750	228,279	219,157	230778	260706	262,019	276,214	434,956
Girls	223,088	225,402	216,466	226819	256028	257,938	444,897	438,591
Total	449,838	453,681	435,623	457597	516734	519,957	721,111	873,547
% Girls	49.6	49.7	p	49.6	49.5	49.6	61.7	50.2
REPEATERS								
Boys	11,372	12,670	16,008	19017	16174	19233	21412	15281
Girls	10,319	11,584	14,784	17317	14470	17076	19271	14824
Total	21,691	24,254	30,792	36334	30644	36309	40683	30105
% Girls	47.6	47.8	48.0	47.7	47.2	47.0	47.4	49.2
% REPEATERS								
Boys	5.0	5.55	7.30	8.2	6.2	7.3	7.8	3.8
Girls	4.6	5.14	6.83	7.6	5.7	6.6	7.1	3.7
Total	4.8	5.3	7.1	7.9	6.0	7.0	7.5	3.8
PRIVATE SCHOOLS								
Boys	81,141	111,872	109,375	124607	128593	151,010	204,002	155,398
Girls	78,405	107,289	104,669	120100	123491	146,705	196,698	152,675
Total	159,546	219,161	214,044	244707	252084	297,715	400,700	308,073
% Girls	49.1	49.0	48.9	49.1	49.0	49.3	49.1	49.6
Boys	3,475	5,167	6,032	7714	6686	8227	11846	3186
Girls	3,025	4,726	5,457	7080	5930	7497	10409	3133
Total	6,500	9,893	11,489	14794	12616	15724	22255	6319
% Girls	46.5	47.8	47.5	47.9	47.0	47.7	46.8	49.6
% REPEATERS								
Boys	4.3	4.6	5.5	6.2	5.2	5.4	5.8	3.3
Girls	3.9	4.4	5.2	5.9	4.8	5.1	5.3	3.3
Total	4.1	4.5	5.4	6.1	5.0	5.3	5.6	3.3

Source: GES

Annex 16 (cont'd): Primary School Enrolment (Levels)

	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
PUBLIC AND PRIVATE SCHOOLS								
Boys	1,261,197	1,352,992	1,302,405	1,359,150	1,323,320	1,403,913	1,525,548	1,606,178
Girls	1,116,247	1,207,888	1,175,252	1,227,284	1,200,917	1,282,220	1,403,988	1,516,725
Total	2,377,444	2,560,880	2,477,657	2,586,434	2,524,237	2,686,133	2,929,536	3,122,903
% Girls	47.0	47.2	47.4	47.5	47.6	47.7	47.9	48.6
REPEATERS (Abs.)								
Boys	54,089	69,373	69,847	95,254	79,786	82,096	91,084	70,227
Girls	45,824	58,517	59,283	82,076	68,732	70,630	79,693	65,061
Total	99,913	127,890	129,130	177,330	148,518	152,726	170,777	135,288
% Girls	45.9	45.8	45.9	46.3	46.3	46.2	46.7	48.1
REPEATERS (%)								
Boys	4.3	5.1	5.4	7.0	5.7	5.5	5.7	4.3
Girls	4.1	4.8	5.0	6.7	5.9	5.7	5.8	4.3
Total	4.2	5.0	5.2	6.9	5.9	5.7	5.8	4.3
PUBLIC SCHOOLS								
Boys	1,097,670	1,123,394	1,081,569	1,116,801	1,116,846	1,153,228	1,217,099	1,365,836
Girls	963,074	991,587	966,327	996,948	1,004,894	1,043,546	1,111,225	1,281,780
Total	2,060,744	2,114,981	2,047,896	2,113,749	2,121,740	2,196,774	2,328,324	2,647,616
% Girls	46.7	46.9	47.2	47.2	47.4	47.5	47.7	48.4
REPEATERS (Abs.)								
Boys	51,013	63,981	63,936	87,226	73732	75686	83009	65618
Girls	43,041	53,628	53,968	75,326	63323	64874	72511	60604
Total	94,054	117,609	117,904	162,552	137,055	140,560	155,520	126,222
% Girls	45.8	45.6	45.8	46.3	46.2	46.2	46.6	48.0
REPEATERS (%)								
Boys	4.6	5.7	5.9	7.8	6.6	6.6	6.8	3.8
Girls	4.5	5.4	5.6	7.6	6.3	6.2	6.5	3.7
PRIVATE SCHOOLS								
Boys	163,527	229,598	220,836	242,349	206,474	250,685	308,449	240,342
Girls	153,173	216,301	208,925	230,336	196,023	238,674	292,763	234,945
Total	316,700	445,899	429,761	472,685	402,497	489,359	601,212	475,287
% Girls	48.4	48.5	48.6	48.7	48.7	48.8	48.7	49.4
REPEATERS (Abs.)								
Boys	3,076	5,392	5,911	8028	6054	6410	8075	4609
Girls	2,783	4,889	5,315	6750	5409	5756	7182	4457
Total	5,859	10,281	11,226	14778	11463	12166	15257	9066
% Girls	47.5	47.6	47.3	45.7	47.2	47.3	47.1	49.2
REPEATERS (%)								
Boys	1.9	2.3	2.7	3.3	2.9	2.6	2.6	1.9
Girls	1.8	2.3	2.5	2.9	2.8	2.4	2.5	1.9

Annex 17: JSS Enrolment (Levels)

	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
				PUBLIC AND PRIVATE SCHOOLS				
Boys	435,191	455,154	437,006	468,368	468,923	498,786	548,156	557,261
Girls	355,493	377,865	367,239	397,122	396,285	420,548	462,090	483,741
Total	790,684	833,019	804,245	865,490	865,208	919,334	1,010,246	1,041,002
% Girls	45.0	45.4	45.7	45.9	45.8	45.7	45.7	46.5
REPEATERS (Abs.)								
Boys	9,732	12,906	13,799	18,905	15,138	19,855	24,932	19,804
Girls	8,078	11,174	11,223	16,337	13,018	17,695	23,031	18,238
Total	17,810	24,080	25,022	35,242	28,156	37,550	47,963	38,042
% Girls	45.4	46.4	44.9	46.4	46.2	47.1	48.0	47.9
REPEATERS (%)								
Boys	2.2	2.8	3.2	4.0	3.2	4.0	4.5	3.6
Girls	2.3	3.0	3.1	4.1	3.3	4.2	5.0	3.8
Total	2.3	2.9	3.1	4.1	3.3	4.1	4.7	3.7
				PUBLIC SCHOOLS				
Boys	403,293	405,486	382,918	404,714	404,906	423,943	450,597	476,071
Girls	325,983	330,765	316,649	337,035	335,847	350,039	371,608	406,989
Total	729,276	736,251	699,567	741,749	740753	773,982	822,205	883,060
% Girls	44.7	44.9	45.3	45.4	45.3	45.2	45.2	46.1
REPEATERS (Abs.)								
Boys	9,308	12,114	12,655	17,703	13934	17969	22461	18734
Girls	7,643	10,355	10,117	15,169	11823	15879	20581	17189
Total	16,951	22,469	22,772	32,872	25,757	33,848	43,042	35,923
REPEATERS (%)								
Boys	2.3	3.0	3.3	4.4	3.4	4.2	5	3.9
Girls	2.3	3.1	3.2	4.5	3.5	4.5	5.5	4.2
Total	2.3	3.1	3.3	4.4	3.5	4.4	5.2	4.1
				PRIVATE SCHOOLS				
Boys	31,898	49,668	54,088	63,654	64,017	74,843	97,559	81,190
Girls	29,510	47,100	50,590	60,087	60,438	70,509	90,482	76,752
Total	61,408	96,768	104,678	123,741	124,455	145,352	188,041	157,942
% Girls	48.1	48.7	48.3	48.6	48.6	48.5	48.1	48.6
REPEATERS (Abs.)								
Boys	424	792	1,144	1202	1204	1886	2471	1070
Girls	435	819	1,106	1168	1195	1816	2450	1049
Total	859	1,611	2,250	2370	2399	3702	4921	2119
% Girls	50.6	50.8	49.2	49.3	49.8	49.1	49.8	49.5

Annex 18: Regional Senior Secondary School (SSS) enrolment data, 2001 to 2006

Regions	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Ashanti	41,003	32,235	47,932	72,814	79,366	83,270
Brong Ahafo	17,384	21,234	22,398	28,951	31,721	33,881
Central	28,533	31,040	33,519	41,164	44,074	83,486
Eastern	34,002	39,676	38,248	54,345	58,604	61,302
Greater Accra	29,167	32,235	37,037	39,255	39,730	40,024
Northern	13,679	17,537	17,958	22,401	24,657	25,112
Upper East	9,297	9,128	8,206	10,019	11,270	11,051
Upper West	5,855	5,985	4,706	7,030	8,011	9,095
Volta	21,627	26,497	27,012	35,511	35,362	38,440
Western	16,085	18,929	21,438	27,076	28,735	30,416
TOTAL	**216,632**	**234,496**	**258,454**	**338,566**	**361,530**	**416,077**
% Change		8.25	10.22	31.00	6.78	15.09
Regions		PERCENT SHARES				
Ashanti	18.93	13.75	18.55	21.51	21.95	20.01
Brong Ahafo	8.02	9.06	8.67	8.55	8.77	8.14
Central	13.17	13.24	12.97	12.16	12.19	20.07
Eastern	15.70	16.92	14.80	16.05	16.21	14.73
Greater Accra	13.46	13.75	14.33	11.59	10.99	9.62
Northern	6.31	7.48	6.95	6.62	6.82	6.04
Upper East	4.29	3.89	3.18	2.96	3.12	2.66
Upper West	2.70	2.55	1.82	2.08	2.22	2.19
Volta	9.98	11.30	10.45	10.49	9.78	9.24
Western	7.43	8.07	8.29	8.00	7.95	7.31
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

Source: GES

Annex 19: Enrolment Ratios at Primary Schools and JSS (2001/02 to 2005/06)

	2001/02	**2002/03**	**2003/04**	**2004/05**	**2005/06**
			Gross Enrolment Ratios		
Primary					
Boys	84.0	78.8	81.4	86.2	88.3
Girls	77.0	72.5	75.3	80.3	84.5
Total	80.5	75.7	78.4	83.3	86.4
JSS					
Boys	68.0	67.3	69.7	74.6	73.8
Girls	60.0	59.3	61.3	65.6	66.9
Total	64.0	63.3	65.5	70.1	70.4
			Net Enrolment Ratios		
Primary					
Boys	61.0	57.4	56.5	60.0	69.6
Girls	58.0	54.5	54.7	58.3	68.1
Total	59.5	56.0	55.6	59.2	68.9
JSS					
Boys	30.0	37.3	29.3	31.3	41.5
Girls	31.0	36.6	29.7	31.8	41.7
Total	30.5	37.0	29.5	31.6	41.6

Source: GES

Annex 20: Primary Gross Enrolment Ratio (GER) by Region and Gender

		2001/02	2002/03	2003/04	2004/05	2005/06
Ashanti	Total	77.0	74.0	76.8	83.2	84.5
	Male	80.0	76.5	79.1	85.6	86.2
	Female	75.0	71.4	74.4	80.8	82.8
Brong Ahafo	Total	83.0	80.0	79.8	85.2	92.7
	Male	88.0	84.1	83.9	89.3	95.2
	Female	78.0	75.8	75.7	81.1	90.1
Central	Total	93.0	87.3	88.6	93.7	101.7
	Male	96.0	90.0	91.1	96.5	103.4
	Female	90.0	84.5	86.0	90.8	99.9
Eastern	Total	90.0	88.4	87.4	88.2	86.0
	Male	94.0	90.7	89.5	90.3	87.1
	Female	88.0	86.1	85.1	86.1	84.8
Greater Accra	Total	83.0	64.2	75.5	80.3	71.1
	Male	85.0	66.0	77.8	82.7	72.2
	Female	80.0	62.5	73.3	78.1	70.0
Northern	Total	65.0	65.6	66.8	71.5	83.6
	Male	74.0	73.7	73.8	77.6	88.4
	Female	55.0	57.2	59.7	65.4	78.7
Upper East	Total	70.0	74.7	76.2	80.4	90.6
	Male	70.0	74.8	77.0	79.7	89.0
	Female	69.0	74.5	75.5	81.2	92.3
Upper West	Total	63.0	68.7	71.5	77.3	100.4
	Male	63.0	68.2	70.7	75.6	97.1
	Female	63.0	69.6	72.3	79.2	103.9
Volta	Total	83.0	75.5	79.1	81.8	85.6
	Male	87.0	78.9	83.0	86.0	88.9
	Female	78.0	72.1	75.3	77.4	82.3
Western	Total	84.0	77.7	79.7	87.2	86.6
	Male	88.0	81.1	83.0	90.7	88.9
	Female	80.0	74.4	76.5	83.8	84.3
National	Total	80.0	75.7	78.4	83.3	86.4
	Male	84.0	78.8	81.4	86.2	88.3
	Female	77.0	72.5	75.3	80.3	84.5
Source: GES						

Annex 21: Primary Net Enrolment Ratio (NER) by Region and Gender

REGION		2001/02	2002/03	2003/04	2004/05	2005/06
Ashanti	Total	59.0	57.0	56.2	61.5	70.3
	Male	60.0	58.1	56.7	62.1	71.3
	Female	58.0	55.9	55.8	60.9	69.4
Brong Ahafo	Total	59.0	58.3	54.2	57.4	77.3
	Male	61.0	60.5	55.7	58.8	78.4
	Female	57.0	56.1	52.7	55.9	76.3
Central	Total	70.0	65.9	62.7	66.5	82.6
	Male	71.0	67.1	63.0	67.1	82.9
	Female	69.0	64.8	62.4	65.8	82.3
Eastern	Total	67.0	66.6	61.5	61.7	67.3
	Male	67.0	67.2	61.5	61.7	67.3
	Female	66.0	66.0	61.4	61.8	67.4
Greater Accra	Total	61.0	48.2	53.7	56.5	52.1
	Male	62.0	48.9	54.6	57.6	52.8
	Female	60.0	47.6	52.9	55.4	51.3
Northern	Total	48.0	45.3	49.0	52.4	65.4
	Male	53.0	50.4	52.8	55.3	68.0
	Female	43.0	40.1	45.1	49.5	62.7
Upper East	Total	52.0	52.0	53.2	55.5	67.0
	Male	50.0	51.1	52.2	53.6	64.8
	Female	53.0	53.0	54.3	57.4	69.3
Upper West	Total	45.0	47.3	49.7	54.5	70.0
	Male	44.0	46.0	47.9	51.9	66.4
	Female	47.0	48.8	51.7	57.3	73.9
Volta	Total	56.0	53.0	51.2	53.4	67.2
	Male	57.0	54.0	52.1	54.6	68.6
	Female	55.0	51.9	50.3	52.1	65.7
Western	Total	64.0	58.9	59.2	65.4	73.3
	Male	66.0	60.8	60.5	67.0	74.5
	Female	62.0	57.0	57.9	63.7	72.0
National	Total	64.0	55.9	55.6	59.1	68.8
	Male	68.0	57.4	56.5	60.0	69.6
	Female	60.0	54.5	54.7	58.3	68.1

Source: GES

Annex 22: JSS GROSS ENROLMENT RATIO (GER) BY REGION AND GENDER

REGION		2001/02	2002/03	2003/04	2004/05	2005/06
Ashanti	Total	67.0	66.0	69.0	73.8	75.0
	Male	72.0	70.6	74.4	79.1	79.7
	Female	62.0	61.5	63.7	68.5	70.4
Brong Ahafo	Total	60.0	60.0	60.6	65.1	69.3
	Male	64.0	64.5	65.3	70.1	73.7
	Female	55.0	55.2	55.6	59.8	64.7
Central	Total	75.0	74.4	76.8	83.0	86.2
	Male	77.0	78.3	80.6	86.6	89.3
	Female	71.0	70.3	72.8	79.1	82.9
Eastern	Total	69.0	69.4	69.7	7,101.0	67.9
	Male	71.0	72.3	72.5	73.9	69.6
	Female	66.0	66.3	66.6	67.9	65.4
Greater Accra	Total	79.0	74.1	74.7	79.3	69.9
	Male	84.0	79.0	79.4	84.8	73.5
	Female	74.0	69.8	70.5	74.4	66.6
Northern	Total	39.0	42.5	45.4	51.4	57.5
	Male	46.0	50.6	53.5	59.9	63.4
	Female	30.0	32.9	35.8	41.4	50.5
Upper East	Total	39.0	42.8	46.7	51.5	54.4
	Male	39.0	43.7	47.0	50.0	53.8
	Female	38.0	41.7	46.4	53.3	55.2
Upper West	Total	45.0	47.0	50.3	59.6	67.6
	Male	47.0	49.3	52.2	64.5	67.6
	Female	42.0	44.4	48.2	54.1	67.6
Volta	Total	68.0	66.5	67.8	69.5	71.9
	Male	72.0	70.2	71.7	74.7	75.4
	Female	64.0	62.6	63.6	64.1	68.1
Western	Total	63.0	58.6	64.3	70.7	70.4
	Male	66.0	62.0	68.5	75.1	74.2
	Female	60.0	55.1	60.0	66.1	66.4
National	Total	59.0	63.4	65.6	70.2	70.4
	Male	61.0	67.3	69.7	74.6	73.8
	Female	58.0	59.3	61.3	65.6	66.9

Source: GES

Annex 23: JSS NET ENROLMENT RATIO (NER) BY REGION AND GENDER

REGION		2001/02	2002/03	2003/04	2004/05	2005/06
Ashanti	Total	36.0	42.5	34.9	38.2	41.6
	Male	36.0	43.7	35.3	38.8	42.1
	Female	35.0	41.4	34.6	37.6	41.2
Brong Ahafo	Total	24.0	34.4	22.2	23.6	39.8
	Male	24.0	34.8	22.4	23.7	40.5
	Female	24.0	33.9	22.0	23.5	39.1
Central	Total	37.0	45.0	35.3	37.1	65.0
	Male	37.0	45.1	34.7	36.5	64.7
	Female	38.0	44.8	35.9	37.7	65.3
Eastern	Total	33.0	41.2	31.1	31.6	37.6
	Male	32.0	40.6	30.1	30.2	36.5
	Female	35.0	41.8	32.2	33.1	38.7
Greater Accra	Total	43.0	44.4	40.7	42.8	50.0
	Male	43.0	45.7	41.5	43.6	51.7
	Female	42.0	43.2	40.1	42.1	48.6
Northern	Total	14.0	22.4	16.7	19.2	24.5
	Male	16.0	26.0	18.8	21.1	25.2
	Female	12.0	18.2	14.2	16.9	23.8
Upper East	Total	14.0	19.1	15.4	15.4	24.5
	Male	13.0	17.9	14.3	13.7	23.3
	Female	16.0	20.6	16.8	17.5	26.0
Upper West	Total	14.0	21.9	14.9	17.4	28.0
	Male	14.0	21.7	14.8	17.3	26.0
	Female	14.0	22.2	15.8	17.5	30.3
Volta	Total	26.0	72.3	24.8	26.0	28.0
	Male	25.0	76.0	24.2	26.0	26.0
	Female	27.0	68.3	25.3	26.1	30.3
Western	Total	29.0	34.8	29.1	32.6	43.4
	Male	28.0	35.0	29.3	32.7	42.7
	Female	30.0	34.6	28.9	32.6	44.2
National	Total	30.0	36.9	29.5	31.6	41.6
	Male	30.0	37.3	29.3	31.3	41.5
	Female	31.0	36.6	29.7	31.8	41.7

Source: GES

Annex 24: Trends in teacher supply (levels and percent shares), 1987-2006

Primary Schools										
	1987/1988	**1988/1989**	**1989/1990**	**1990/1991**	**1991/1992**	**1992/1993**	**1993/1994**	**1994/1995**	**1995/1996**	**1996/1997**
Total Teachers	65,305	62,670	62,859	66,946	72,451	67,760	69,232	71,863	67,414	71,340
Trained	37,456	37,769	41,713	42,607	51,310	46,424	47,654	55,325	53,965	54,572
% Trained	57.4	60.3	66.4	63.6	70.8	68.5	68.8	77.0	80.1	76.5
Total Teachers	**1997/1998**	**1998/1999**	**1999/2000**	**2000/2001**	**2001/2002**	**2002/2003**	**2003/2004**	**2004/2005**	**2005/2006**	
Trained	63,689	35	32	35	32	33	32	31	34	
% Trained	50,964	53,100	54,972	51,519	52,314	50,593	50,537	51,670	49,807	
	80.0	73.4	61.3	68.6	64.9	62.9	61.0	57.9	56.3	

Junior Secondary Schools										
	1987/1988	**1988/1989**	**1989/1990**	**1990/1991**	**1991/1992**	**1992/1993**	**1993/1994**	**1994/1995**	**1995/1996**	**1996/1997**
Total Teachers	32,615	34,584	35,262	30,708	34,249	33,824	37,382	37,441	35,273	40,417
Trained	22,192	24,844	22,874	23,303	24,544	25,473	27,823	28,405	29,219	32,032
% Trained	68.0	71.8	64.9	75.9	71.7	75.3	74.4	75.9	82.8	79.3
	1997/1998	**1998/1999**	**1999/2000**	**2000/2001**	**2001/2002**	**2002/2003**	**2003/2004**	**2004/2005**	**2005/2006**	
Total Teachers	37,728	41,597	48,684	44,194	47,445	49,270	51,419	55,958	56,485	
Trained	32,647	34,792	36,177	34,906	37,307	36,685	37,612	39,578	39,920	
% Trained	86.5	83.6	74.3	79.0	78.6	74.5	73.1	70.7	70.7	

Source: Ghana Education Forum Report, 1999; various EMIS reports

Annex 25: Number of Trained Teachers, including percent female (1998/2005)

	1998/1999			1999/2000			2000/2001			2001/2002		
	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained
Combined (Public and private)												
Pre-school	24,693	6,854	27.8	34,033	7,351	21.6	26,540	6,354	23.9	27,882	6,186	22.2
Female	22,628	6,380	28.2	30,508	6,778	22.2	24,207	5,927	24.5	24,863	5,547	22.3
% Female	91.6	93.1		89.6	92.2		91.2	93.3		89.2	89.7	
Primary	72,304	53,100	73.4	89,671	54,972	61.3	75,087	51,519	68.6	80,552	52,314	64.9
Female	25,092	22,292	88.8	28,928	23,078	79.8	26,123	22,449	85.9	25,848	21,317	82.5
% Female	34.7	42.0		32.3	42.0		34.8	43.6		32.1	40.7	
JSS	41,597	34,792	83.6	48,684	36,177	74.3	44,194	34,906	79.0	47,445	37,307	78.6
Female	10,087	9,492	94.1	11,055	9,770	88.4	10,716	9,884	92.2	10,670	9,578	89.8
% Female	24.2	27.3		22.7	27.0		24.2	28.3		22.5	25.7	
Public												
Pre-school	19,005	6,356	33.4	26,630	6,762	25.4	19,040	5,785	30.4	19,043	5,531	29.0
Female	18,016	6,002	33.3	24,379	6,311	25.9	18,054	5492	30.4	17,557	5,063	28.8
% Female	94.8	94.4		91.5	93.3		94.8	94.9		92.2	91.5	
Primary	62,094	51,191	82.4	75,799	52,372	69.1	61,229	48,891	79.8	64,197	49,538	77.2
Female	23,107	21732	94.0	26,006	22266	85.6	23,200	21617	93.2	22,449	20593	91.7
% Female	37.2	42.5		34.3	42.5		37.9	44.2		35.0	41.6	
JSS	37,827	33,586	88.8	43,113	34,509	80.0	38,014	33,081	87.0	40,011	35,013	87.5
Female	9,562	9240	96.6	10,311	9418	91.3	9,929	9525	95.9	9,599	9140	95.2
% Female	25.3	27.5		23.9	27.3		26.1	28.8		24.0	26.1	
Total	118,926	91,133	76.6	145,542	93,643	64.3	118,283	87,757	74.2	123,251	90,082	73.1
Private												
Pre-school	5,688	498	8.8	7,403	589	8.0	7,500	569	7.6	8,839	655	7.4
Female	4,612	378	8.2	6,129	467	7.6	6,153	435	7.1	7,306	484	6.6
% Female	81.1	75.9		82.8	79.3		82.0	76.4		82.7	73.9	
Primary	10210	1909	18.7	13872	2600	18.7	13,858	2,628	19.0	16,355	2,776	17.0
Female	1985	560	28.2	2922	812	27.8	2,923	832	28.5	3,399	724	21.3
% Female	19.4	29.3		21.1	31.2		21.1	31.7		20.8	26.1	
JSS	3770	1206	32.0	5571	1668	29.9	6,180	1,825	29.5	7,434	2,294	30.9
Female	525	252	48.0	744	352	47.3	787	359	45.6	1,071	438	40.9
% Female	13.9	20.9		13.4	21.1		12.7	19.7		14.4	19.1	

Source: GES

Annex 25 (cont'd)

	2002/2003			2003/2004			2004/2005			2005/2006		
	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained	Total Teachers	Total Trained	Percent Trained
Combined (Public and private)												
Pre-school	28,382	6,059	21.3	29,335	6,072	20.7	33,417	6,539	19.6	33,953	8,027	23.6
Female	25,304	5,393	21.3	25,895	5,437	21.0	29,345	5,842	19.9	28,680	7,190	25.1
% Female	89.2	89.0		88.3	89.5		87.8	89.3		84.5	89.6	
Primary	80,459	50,593	62.9	82,833	50,537	61.0	89,278	51,670	57.9	88,461	49,807	56.3
Female	26,409	21,874	82.8	26,539	21,401	80.6	27,746	21,579	77.8	30,014	22,160	73.8
% Female	32.8	43.2		32.0	42.3		31.1	41.8		33.9	44.5	
JSS	49,270	36,685	74.5	51,419	37,612	73.1	55,958	39,578	70.7	56,485	39,920	70.7
Female	10,918	9,825	90.0	10,075	8,895	88.3	10,988	9,499	86.4	12,740	11,011	86.4
% Female	22.2	26.8		19.6	23.6		19.6	24.0		22.6	27.6	
Public												
Pre-school	19,868	5,456	27.5	19,134	5,394	28.2	19,680	5,596	28.4	22,252	7,278	32.7
Female	18,240	4,947	27.1	17653	4928	27.9	18202	5136	28.2	20207	6604	32.7
% Female	91.8	90.7		92.3	91.4		92.5	91.8		90.8	90.7	
Primary	65,777	48,340	73.5	64,631	47,724	73.8	66,802	48,299	72.3	70,334	47,170	67.1
Female	23,501	21,284	90.6	22754	20717	91.0	22952	20672	90.1	25673	21444	83.5
% Female	35.7	44.0		35.2	43.4		34.4	42.8		36.5	45.5	
JSS	41,535	34,664	83.5	41,653	35,076	84.2	43,400	36,269	83.6	45,824	37,149	81.1
Female	10,010	9,461	94.5	9024	8512	94.3	9503	8937	94.0	11478	10605	92.4
% Female	24.1	27.3		21.7	24.3		21.9	24.6		25.0	28.5	
	127,180	88,460	69.6	125,418	88,194	70.3	129,882	90,164	69.4	138,410	91,597	66.2
Private												
Pre-school	8,514	603	7.1	10,201	678	6.6	13,737	943	6.9	11,701	749	6.4
Female	7,064	446	6.3	8242	509	6.2	11143	706	6.3	8473	586	6.9
% Female	83.0	74.0		80.8	75.1		81.1	74.9		72.4	78.2	
Primary	14,682	2,253	15.3	18,202	2,813	15.5	22,476	3,371	15.0	18,127	2,637	14.5
Female	2,908	590	20.3	3785	684	18.1	4794	907	18.9	4341	716	16.5
% Female	19.8	26.2		20.8	24.3		21.3	26.9		23.9	27.2	
JSS	7,735	2,021	26.1	9,766	2,536	26.0	12,558	3,309	26.3	10,661	2,771	26.0
Female	908	364	40.1	1051	383	36.4	1485	562	37.8	1262	406	32.2
% Female	11.7	18.0		10.8	15.1		11.8	17.0		11.8	14.7	

Annex 26: Number of textbooks per a pupil in primary schools by region

Primary Schools

	2001/02		2002/03		2003/04		2004/05		2005/06	
	Textbooks per pupil		Textbooks per pupil		Textbooks per pupil		Textbooks per pupil		Textbooks per pupil	
	Core	Other	Core	Other	Core	Other	Core	Other	Core	Other
ASHANTI	1.9	0.5	1.7	0.4	1.4	0.3	1.1	0.3	2.0	1.7
BRONG	1.8	0.4	1.5	0.3	1.2	0.3	0.9	0.2	1.8	1.2
CENTRAL	1.7	0.4	1.5	0.3	1.2	0.3	0.8	0.2	1.4	1.4
EASTERN	2.0	0.4	1.8	0.3	1.5	0.3	1.2	0.2	2.0	1.6
GREATER ACCRA	2.1	0.7	2.3	0.5	1.9	0.5	1.4	0.4	1.5	1.6
NORTHERN	1.3	0.3	1.4	0.2	1.1	0.2	0.8	0.2	1.9	0.9
UPPER EAST	1.4	0.1	1.3	0.1	1.0	0.1	0.7	0.1	1.2	0.6
UPPER WEST	1.9	0.2	1.5	0.2	1.1	0.2	0.8	0.2	2.2	1.0
VOLTA	2.5	0.5	1.8	0.4	1.4	0.3	0.9	0.2	1.4	1.2
WESTERN	1.8	0.4	1.6	0.3	1.3	0.3	1.0	0.2	2.0	1.3
NATIONAL	1.8	0.4	1.7	0.3	1.4	0.3	1.0	0.2	1.8	1.3

Junior Secondary Schools

	2001/02		2002/03		2003/04		2004/05		2005/06	
	Textbooks per pupil		Textbooks per pupil		Textbooks per pupil		Textbooks per pupil		Textbooks per pupil	
	Core	Other	Core	Other	Core	Other	Core	Other	Core	Other
ASHANTI	2.9	2.9	2.7	2.5	2.4	2.3	2.1	2.0	2.7	5.0
BRONG	3.0	2.7	2.7	2.2	2.3	2.0	2.0	1.8	2.2	4.6
CENTRAL	1.7	0.4	2.2	1.7	1.9	1.4	1.2	0.9	2.6	4.3
EASTERN	2.0	0.4	3.1	2.6	2.6	2.3	2.1	1.8	2.8	5.2
GREATER ACCRA	2.1	0.7	2.8	1.9	2.4	1.8	1.7	1.2	2.5	3.3
NORTHERN	1.3	0.3	2.3	1.4	1.9	1.2	1.4	0.9	2.3	4.2
UPPER EAST	1.4	0.1	2.2	0.1	1.7	0.8	1.2	0.5	1.8	3.4
UPPER WEST	1.9	0.2	2.4	1.4	1.8	1.2	1.2	0.8	2.5	4.9
VOLTA	2.0	0.5	3.1	2.3	2.5	1.9	1.5	1.1	2.1	3.9
WESTERN	1.8	0.4	2.6	2.1	2.3	1.9	1.9	1.5	2.7	4.3
NATIONAL	2.7	2.4	2.7	2.1	2.3	1.9	1.7	1.4	2'5	4.4

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ISSN 1754–2464